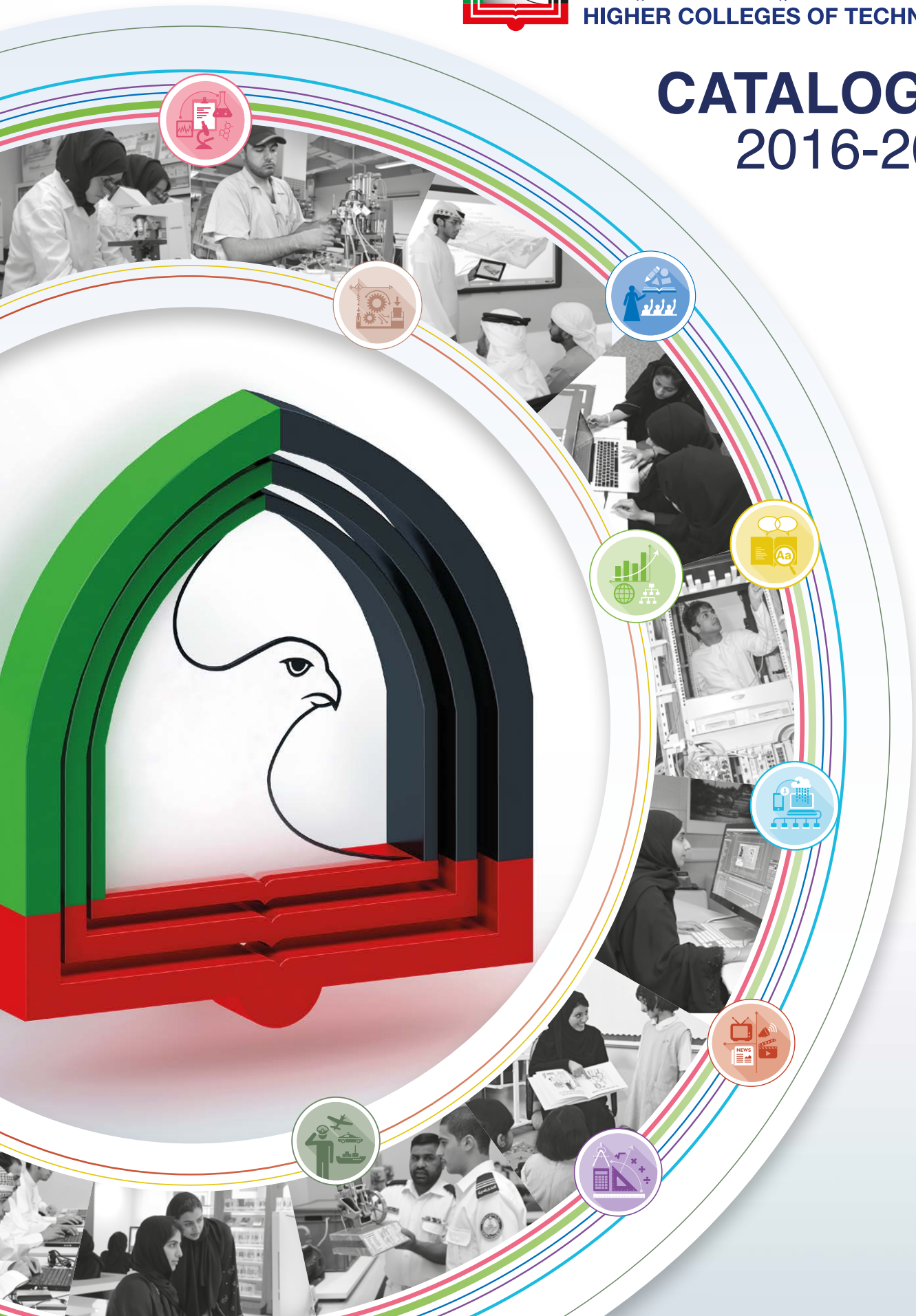




كليات التقنية العليا
HIGHER COLLEGES OF TECHNOLOGY

CATALOGUE 2016-2017





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HIGHER COLLEGES OF TECHNOLOGY



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**2016 - 2017
CATALOGUE**

Every effort has been made to ensure the accuracy of this publication at the time of going to press; however, HCT reserves the right to alter any programme or course. Students should check for any amendments prior to enrolment. All amendments or updates will be published in the official online version at www.hct.ac.ae



MESSAGE FROM THE CHANCELLOR



As the Higher Colleges of Technology develops and grows in its 29th year of operation, the focus in this 2016-17 academic year will undoubtedly be a dedicated commitment to providing our students with the highest quality, job-relevant, applied and technical education. This will enable us to nurture the next generation of work-ready graduates and allow us to maintain our mission to be the UAE's, and the region's, top-ranked higher education institution in this field.

The HCT is grateful to have the committed and continuous support and patronage of our nation's leaders, and we greatly appreciate their guidance and leadership which have helped the HCT to become a model of educational effectiveness and achievement; renowned for providing highly skilled and well-prepared graduates. This catalogue reflects the directives and initiatives of our nation's leadership, such as being aligned to the UAE Vision 2020, which seeks to expand and enrich the UAE's reputation as a knowledge society.

This catalogue provides an extensive list of programmes and courses offered by the HCT's core academic Divisions, covering a broad range of industry-relevant fields of study which will appeal to many young Emiratis eager to pursue post-secondary studies. This publication also contains details of the Foundations, General Studies and Emirati and Arabic courses which will greatly assist many HCT students as they pursue the next phase of their education.

This comprehensive guide is designed to assist every HCT student, and those considering HCT for their post-secondary studies, to gain the maximum benefit from their time at our campuses, experiencing a complete and holistic education. This information will enable the students to reach their full potential and ultimately make worthwhile contributions to the UAE, as well as their respective workplaces and communities.

To all students undertaking studies at our campuses across the nation, I extend my best wishes throughout the forthcoming year of learning and growth, knowledge acquisition, experiences and achievements.

Mohammad Omran Al Shamsi

Chancellor
Higher Colleges of Technology



MESSAGE FROM THE VICE CHANCELLOR



I am pleased to introduce the Higher Colleges of Technology's academic catalogue for the 2016-2017 academic year, which will be a comprehensive aid for new and existing HCT students and their families; faculty and staff members; and for our industry partners the broader community.

This complete catalogue fully details the programmes and courses in each of the academic and supporting Divisions offered this year by HCT's campuses across the UAE. It also provides our students with valuable information and important dates about the HCT's operational structures, policies, rules and regulations, its learning model and the services and resources it provides across all campuses.

The diversity of programmes offered in this catalogue indicates that the HCT is keeping pace with the needs of the United Arab Emirates' economy, providing highly qualified and work-ready graduates. We will continue with these endeavours to meet the requirements of UAE society, and particularly employers, by offering the best quality, career-oriented academic, technical and training programmes.

To achieve this we must ensure that all our courses are linked to industry needs and standards, no matter what the field, thus ensuring our students are receiving the appropriate experience in their field of choice so that they can seamlessly fit into the workplace. This vision is embedded in our five-year HCT 2.0 initiative, which strives to empower students with the 21st century skills needed to succeed in today's globalized workplaces.

As part of these processes HCT is progressing well with the accreditation of its core academic disciplines, such as with the CAA and ABET accreditation in a number of Computer Information Science and Engineering Technology courses.

As an integral part of the HCT 2.0 Strategic Plan, we are well advanced with our plans to provide students with a Hybrid Education Model, giving them the choice of academic or applied streams of study. This model will allow us to provide our students with in-demand courses that will meet the needs of industry and employers.

We are pleased to provide details of the many varied and exciting educational opportunities found in this catalogue, to enable our students to fully plan and prepare for their future careers. I wish all HCT students great success, discovery and enjoyment in their studies throughout the year, as they strive for excellence in all that they undertake.

Dr Abdullatif Al Shamsi

Vice Chancellor
Higher Colleges of Technology

Preface

This catalogue is divided into three sections.

In the first section, an overview of the HCT is provided, including its history and status in the current educational climate of the United Arab Emirates. Information is also provided about HCT's governance and organisational structures (including a high-level organisational chart) and the key accrediting and benchmarking groups that ensure high quality academic programmes. This section concludes with an overview of the academic framework and the learning resources and services that support HCT students.

The second section provides more detailed information about admission to the HCT, its regulations, academic policies and procedures. It also includes key information about academic progression at HCT, grading, graduation and student conduct. A more complete statement of HCT Academic regulations and policies is published online at <http://www.hct.ac.ae>. The online catalogue may also contain any addenda for updated policies.

The third section provides information about programmes offered at HCT, the ideal semester and course descriptions. Included in this section is information about the programme learning outcomes or goals, and the programme length. This section also provides a detailed overview of individual programmes, including the required core courses, electives and General Studies courses, along with the credit units for each course. In some programmes, the courses and credit units required to graduate with a particular major in a discipline are also provided.

Contents

Academic Calendar	10	PROGRAMMES	
Religious and Public Holidays	11	Applied Communications	53
OVERVIEW OF THE HCT	15	Business	61
Governance and Organisation	16	Computer Information Science	95
HCT Overall Organisation Chart	18	Education	113
Accreditation and Benchmarking	21	Engineering Technology and Science	121
Academic Framework	24	Health Sciences	187
Academic Learning Resources	27	Military and Security	221
HCT Services and Resources for Students	28	Foundations	245
		General Studies	249
ACADEMIC POLICIES		APPENDIX	
Key Terminology	32	Course Descriptions	256
Academic Programme	33		
Admission and Enrolment	35		
Registry	39		
Student Support Services	44		
Awards	48		

Academic Calendar 2016-2017

Sunday 21 August 2016 – Thursday 1 August 2017*

Fall Semester 2016	Sun 21 Aug – Thu 15 Dec 2016
Faculty report	Sun 14 Aug 2016
Classes start	Sun 21 Aug 2016
Last day to add courses	Thu 25 Aug 2016
Last day to drop courses	Thu 25 Aug 2016
Last day to withdraw from a semester length course without penalty	Thu 13 Oct 2016
Last day to submit appeal for reinstatement after academic dismissal for Spring 2017	Thu 20 Oct 2016
Last day of classes	Wed 7 Dec 2016
Assessment period	Thu 8 – Thu 15 Dec 2016
Announcement of final grades and Academic Standing	Thu 22 Dec 2016
Semester break for students	Sun 18 Dec 2016 – Thu 5 Jan 2017 (Classes start Sun 08 Jan)
Semester break for faculty	Tue 20 Dec 2016 – Tue 3 Jan 2017 (Faculty report Wed 4 Jan)
Professional development days	Wed 4 Jan – Thu 5 Jan 2017
Spring Semester 2017	Sun 8 Jan – Wed 17 May 2017
Faculty report	Wed 4 Jan 2017
Classes start	Sun 8 Jan 2017
Last day to add courses	Thu 12 Jan 2017
Last day to drop courses	Thu 12 Jan 2017
Last day to withdraw from a semester length course without penalty	Thu 2 Mar 2017
Last day to submit appeal for reinstatement after academic dismissal for Fall 2017	Thu 9 Mar 2017
Last day of classes	Mon 8 May 2017
Assessment period	Tue 9 – Wed 17 May 2017
Announcement of final grades and Academic Standing	Mon 22 May 2017
Semester break for students	Sun 26 Mar – Thu 6 Apr 2017 (Classes start Sun 9 Apr)
Semester break for faculty	Sun 26 – Thu 30 Mar 2017 (Faculty report Sun 2 Apr)
Professional development days	Sun 2 – Thu 6 Apr 2016

Summer Semester I 2017**	Tue 23 May – Thu 22 Jun 2017
Classes start	Tue 23 May 2017
Last day to add courses	Wed 24 May 2017
Last day to drop courses	Wed 24 May 2017
Last day to withdraw from a semester length course without penalty	Thu 8 Jun 2017
Last day of classes	Tue 20 Jun 2017
Assessment period	Wed 21 – Thu 22 Jun 2017
Summer Semester II 2017**	Sun 2 Jul – Tue 1 Aug 2017
Classes start	Sun 2 Jul 2017
Last day to add courses	Mon 3 Jul 2017
Last day to drop courses	Mon 3 Jul 2017
Last day to withdraw from a semester length course without penalty	Tue 18 Jul 2017
Last day of classes	Sun 30 Jul 2017
Assessment period	Mon 31 Jul – Tue 1 Aug 2017
Semester break for Faculty	Sun 2 Jul – Thu 10 Aug 2017 (Faculty report Sun 13 Aug)
Professional development days	Tue 15 – Thu 17 Aug 2017

*The date for the end of the Academic Year is subject to Summer Semester II

**All Faculty and Staff are on Duty for either Summer Semester 1 or Summer Semester II

Religious and Public Holidays**

Arafat Day	September 10, 2016
Eid Al-Adha	September 11 – 13, 2016
Islamic New Year	October 2, 2016
Commemoration Day	November 30 Nov 2016
National Day	December 2 - , 2016
Prophet's Birthday	December 11, 2016
Isra Wal Miraj	April 24, 2017
Arafat Day	August 31, 2017
Eid Al Adha	September 1-3, 2017
Islamic New Year	September 22, 2017
Commemoration Day	November 30, 2017
Prophet's Birthday	November 30, 2017
UAE National Day	December 2, 2017

**Religious holidays are subject to confirmation





كليات التقنية العليا
HIGHER COLLEGES OF TECHNOLOGY

HCT
2.0

OVERVIEW OF THE HCT



Overview of the HCT

In 1985, HE Sheikh Nahayan Mabarak Al Nahayan, Chancellor of the United Arab Emirates University, made a commitment to establish a new system of post-secondary education for UAE nationals that would stress the ideals of productivity, self-determination and excellence.

His Excellency envisioned a system of the highest quality that would be used to educate Nationals for the professional and technical careers necessary in a rapidly developing society.

In fulfillment of that vision, the Higher Colleges of Technology (HCT) was established in 1988 by Federal Law No 2 issued by the Late Sheikh Zayed bin Sultan Al Nahyan, may his soul rest in peace.

Today, the system of the HCT is the largest higher educational institution in the United Arab Emirates with the current enrolment exceeding 23,000 students, all of whom are UAE nationals.

The seventeen HCT men's and women's campuses offer an impressive range of instructional programmes that are either federally funded or sponsored by employers in the fields of Applied Communications, Business, Computer Information Science, Engineering Technology and Science, Education, Foundations, General Studies and Health Sciences with all HCT programmes being delivered in English, excepting courses in Arabic and Emirati Studies.

Graduates of the HCT make immediate contributions to government, business and industrial sectors, and develop into leaders in their fields. The HCT is dedicated to student-oriented learning, which places the responsibility for education upon the students themselves and promotes lifelong learning.

Profile

Enrolment	23,509 students
Campuses	17
Academic & Supporting Divisions	9
Graduates	52,038
Credentials	72,079

رؤيتنا

كليات التقنية العليا رائدة التعليم العالي التطبيقي في تمكين الأجيال من المساهمة في صناعة مستقبل دولة الإمارات العربية المتحدة.

Our Vision

The Higher Colleges of Technology is the leading applied higher education institution in empowering generations to contribute to shaping the future of the UAE.

رسالتنا

تلتزم كليات التقنية العليا بتوفير برامج التعليم العالي التطبيقي التي تزود الطلبة بالعلوم والمهارات والكفاءات وفق المعايير الدولية وبما يلبي احتياجات المجتمع وقطاعات الأعمال في دولة الإمارات العربية المتحدة.

Our Mission

Provide applied higher education to equip generations with knowledge, skills, and competencies that meet international standards and the future needs of the UAE industry and society.

القيم

خدمة المجتمع، روح الإنتماء، الاحترام، التميز، النزاهة، المسائلة، الإبداع والابتكار

Values

Creativity & Innovation, Accountability, Integrity, Excellence, Respect, Community Spirit, Service to Society

HCT Institutional Strengths

HCT's institutional strengths that differentiate it from other higher educational institutions in the UAE are:

- **commitment to educational access** - HCT is an access institution for the UAE built upon twenty-five years of producing high quality Emirati graduates who are prepared to enter the workforce and contribute to economic development and UAE society;
- **practical application of knowledge** - HCT is a national resource for connecting the practical application of knowledge to workforce needs and applications. This is the cornerstone of the HCT learning model and its educational philosophy;
- **the quality of our faculty and learning environment** - HCT produces graduates with superior technical skills, Arabic and English language competency, and work readiness skills that have enabled graduates to be productive and contributing members to the economy and society. The quality and high employment rate of its graduates are reflective of the quality of the faculty and the learning environment;
- **institutional and programme accreditation** - HCT programmes are internationally accredited by professional accrediting agencies;
- **linkages with business and the community** - HCT programmes are continually aligned with the changing and emerging needs of business and industry; and are supported by state-of-the-art technologies. HCT campuses are also cultural and community centres that contribute to local culture, history and Emirati heritage;
- **graduate employment** - HCT's most consistent effectiveness measure is the high employment rate of its graduates who are in strong demand by employers across the UAE.

Governance and Organisation

Governance

The Higher Colleges of Technology (HCT) constitute a federal independent academic corporate body for higher education established under Federal law no. 2 of 1988 and later reorganised under Federal law no. 17 of 1998. HCT confers degrees at the Graduate, Bachelor Higher Diploma and Diploma levels. The HCT operates as a system of 17 separate campuses for male and female students in urban and rural locations in five emirates. The headquarters are located in the city of Abu Dhabi.

The HCT is governed by a Board of Trustees which includes the Chancellor, HE Mohammad Omran Al Shamsi, the Vice Chancellor, Dr Abdullatif Al Shamsi, and other qualified and experienced members from various sectors in the UAE appointed by the Cabinet on the recommendation of the Chancellor. The Chancellor is Chair of the Board of Trustees and the legal representative of the System and is responsible for carrying out the decisions of the Board of Trustees. The Vice Chancellor is the Chief Executive Officer and is responsible for the management of the HCT and the implementation of its regulations and resolutions. In addition, the Vice Chancellor is responsible for developing an institutional culture of innovation as well as enhancing HCT's organisational performance.

Organisation

The HCT organisation includes a central administration with four divisions, each headed by a Deputy Vice Chancellor, namely: Administration Division; Academic Affairs Division; Campus Operations Division; and Strategy and Communication Division (see p18 for a high-level organisational chart).

Administration Division

The Administration Division is made up of various units including Human resources, Finance, Information Technology, Facilities and Services, and Procurement and Contracts. They perform the key functions and services that provide a centralised resource to enable the campuses to achieve their educational objectives.

Academic Affairs Division

Academic Affairs provides academic leadership, academic policy and planning guidance, coordination and evaluation of instructional programmes and processes, academic standards and assessment, and learning resources in support of the implementation of academic programmes. It is also responsible for developing the research plan for HCT and for managing and monitoring faculty members' activities and building their research capabilities.

Academic Divisions

six core academic divisions and three supporting divisions, namely:

- **Division of Applied Communications**
- **Division of Business**
- **Division of Computer Information Science**
- **Division of Education**
- **Division of Engineering Technology and Science**
- **Division of Health Sciences**
- **Department of Arabic & Emirati Studies**
- **Department of Foundations**
- **Department of General Studies**

The Division Executive Deans provide academic leadership to ensure the quality of teaching, learning, evaluation and assessment. They manage academic resources to support all HCT campuses, and maintain and enhance the HCT's learner-centred environment.

Industry Sponsored Programmes

HCT is dedicated to the delivery of industry sponsored courses and programmes to UAE nationals, offering Diploma, Higher Diploma and Bachelor of Science level degree credentials aimed at developing the workforce in a constantly changing environment. Individuals may have the opportunity to join graduate Master degree programmes that are offered in response to the region's needs. The objective is to serve the wider community of UAE nationals and expatriates by providing them with high calibre continuing education and to contribute to the development of the country's workforce, ensuring individual and economic growth and sustainability.

The office of Academic Affairs also manages a number key institutional roles.

Teaching and Learning Department

The HCT is committed to providing the highest quality educational experience for students. The Teaching and Learning Department comprises three teams: Educational Technology, Library Technical Services, and Professional Development and Practice. Together, the three teams work with all Divisions and their respective Executive Deans to develop institutional capacity that enhances the student experience. This includes:

- using educational technologies more effectively to support student learning;

- supporting the design and development of programmes and courses that align with the National Qualifications Framework for the Emirates and programme accreditation via the Committee for Academic Accreditation;
- providing library technical services to all HCT campuses and users;
- supporting professional development workshops and programmes for faculty; and
- supporting the scholarship of teaching and learning.

The Teaching and Learning department also works closely with the Executive Deans to support the HADEF initiative to develop the skills and knowledge of new Emirati faculty who have joined HCT. In addition, the department also supports the institutional Learning Management and Course Management Systems, the use of eTextbooks in all programmes, and undertakes a variety of initiatives to improve the student learning experience.

Faculty Affairs and Applied Research (FAAR)

FAAR is committed to supporting an active research community at HCT. FAAR provides leadership in devising, implementing and monitoring the system-wide applied research agenda, developing innovative research approaches towards building partnerships with industry and communities.

Programmes and Curricula

The Programmes and Curricula Department is responsible for ensuring quality in programme development, undertaking periodic curriculum reviews and ensuring that assessment of student learning outcomes are in accordance with HCT policies and procedures. The Office also oversees the development of new academic programmes including modifications to established programmes, and external reviews.

Organisational Excellence

The Office of Organisational Excellence is the unit responsible for facilitating, supporting and monitoring government and institutional excellence, assessment, institutional research, and accreditation within the system of the Higher Colleges of Technology. The unit aims to ensure the attainment of high quality standards across the HCT. Its role is to refine and coordinate a participatory process of institutional evaluation with the goal of continuous quality improvement of academic programmes, curriculum delivery, graduate outcomes and student support services and administrative units that guide the HCT towards accomplishment of its mission.

Campus Operations Division

The Campus Operations Division is responsible for providing leadership and oversight to all Campus Directors within the HCT system. It provides strategic vision and direction to all campuses. Specifically, the Division is responsible

for operations management at all HCT campuses which includes financial, HR, planning, facilities administration, student support services, and community relations and academic operations. Strategy and Communication Division
The Strategy and Communication Division is responsible for developing and implementing the HCT Strategic Plan and for achieving its performance indicators. The Division directs and monitors the use of different digital (including social media) and printed media that connect HCT with its internal and external stakeholders. The Division is also responsible for establishing, managing, and maintaining HCT relations and partnerships with its larger community.

Student Services

Provides student support include marketing and student recruitment, student life, student success and central registry across the HCT system.

Campus Academic Operations (CAO)

Campus Academic Operations undertake, manage and oversee all facets of academic operations required for the delivery of academic programmes and curricula at a campus in order to deliver a quality learning experience for students. This Office has direct oversight of three key elements that support student learning: labs and workshops, academic services and advising, and learning resources.

Campus Services (CaS)

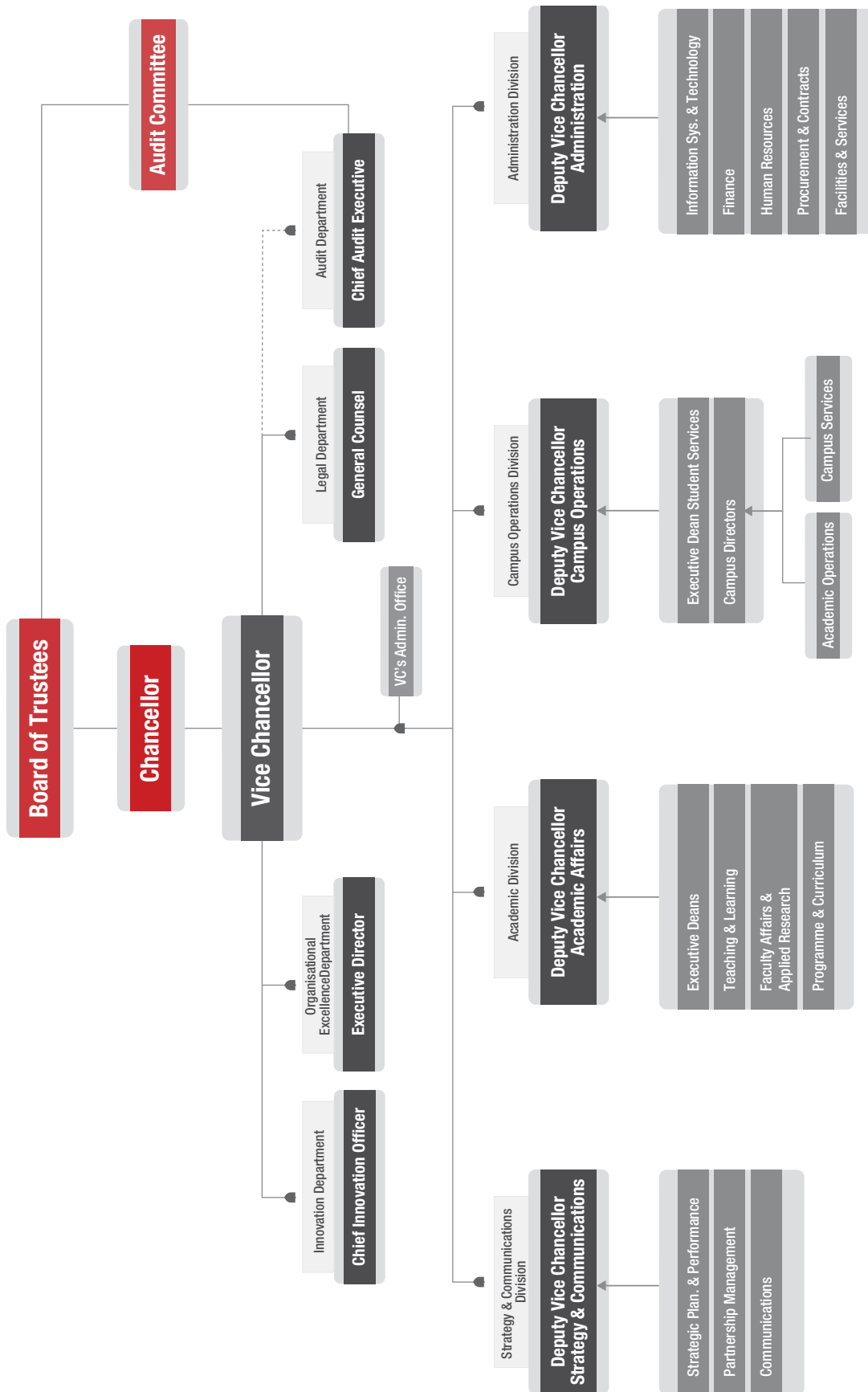
Campus Services are responsible for directing the planning, development and implementation of all non-academic support services at a campus, including Student Services, IT Services, Facilities, and Procurement. The Office of CaS provides leadership to ensure that campus services are both efficient and effective in meeting the academic and social needs of students when on the campus.

Strategy and Communication Division

The Strategy and Communication Division is responsible for developing and implementing the HCT Strategic Plan and for achieving its performance indicators. The Division directs and monitors the use of different digital (including social media) and printed media that connect HCT with its internal and external stakeholders. The Division is also responsible for establishing, managing, and maintaining HCT relations and partnerships with its larger community.

HCT Overall Organisation Chart

(current as at September 2016)



Higher Colleges of Technology Campus and Division Contacts

HCT has campuses throughout the UAE. Each campus has a Campus Director who is responsible for community relations and creating an effective learning environment at the local community level. In addition, each Division has an Executive Dean who is responsible for the academic integrity, quality and delivery of the programmes under their leadership. The contact information for each is provided below:

HCT Campus	Founded	Director	Telephone	Fax	PO Box
Al Ain Men's	1988	Dr Yahya Al Ansaari	02-206-3222	03-782 0099	17155
Al Ain Women's	1988	Ms Hamsa Al Ammari	02-206-3111	03-782 0766	17258
Abu Dhabi Men's	1988	Mr Abdu Rahman Al Jahoushi	02-206-2444	02-445 1571	25035
Abu Dhabi Women's	1995	Dr. Addel Al Ameri	02-206-2111	02-641 3456	41012
Dubai Men's	1989	Dr Khaled Al Hammadi	02-206-4222	04-326 0303	15825
Dubai Women's	1989	Dr Tarifa Al Zaabi	02-206-4111	04-267 3939	16062
Fujairah Men's	1989	Dr Ali Al Mansoori (Acting)	02-206-9222	09-222 2113	4114
Fujairah Women's	2004	Dr Ali Al Mansoori (Acting)	02-206-9111	09-228 1313	1626
Madinat Zayed Men's	2006	Dr Hashim Al Zaabi	02-206-2555	02-884 9081	58855
Madinat Zayed Women's	2006	Dr Hashim Al Zaabi	02-206-2555	02-884 9081	58855
Ras Al Khaimah Men's	1999	Dr Hassan Almheiri	02-206-7222	07-222 3955	4793
Ras Al Khaimah Women's	1993	Dr Hassan Almheiri	02-206-7111	07-221 0660	4792
Ruwais Men's	2007	Dr Hashim Al Zaabi	02-206-2666	02-8778158	58855
Ruwais Women's	2007	Dr Hashim Al Zaabi	02-206-2666	02-8778158	58855
Sharjah Men's	1993	Dr Abdulla Al Suwajji	02-206-6222	06-558 5252	7946
Sharjah Women's	1998	Dr Muhadditha Al Hashimi	02-206-6111	06-558 5353	7947

HCT Academic Divisions	Executive Deans
Arabic and Emirati Studies	Dr Obaid Al Muhairi
Business	Dr Ayesha Abdulla
Computer Information Science and Applied Communications	Dr Hamad Odhabi
Education and General Studies	Dr Phil Quirke
Engineering Technology and Science	Dr. Mohammad Aljarrah
Foundations	Mr Rami Hamdan
Health Sciences	Dr Muhadditha Al Hashimi
HCT Academic Support	Director
Teaching and Learning	Dr Jihad Moheidat
Student Services	Mr Ahmed Al Mulla

Accreditation

The Higher Colleges of Technology has an ongoing commitment to achieving international standards in the programmes delivered and the levels of graduate skills. To ensure such standards are met and its programmes are at the cutting edge of technology and industry standards, the HCT has formed alliances with leading universities, educational associations and professional accreditation boards around the world.

Higher education accreditation is the formal recognition by a recognised accrediting body that a university, college or school meets accepted standards in its educational programmes, curriculum, faculty, services and facilities.

Institutional accreditation applies to an entire institution, while programme accreditation applies to a particular programme of study.

The HCT has campuses located in the Emirates of Abu Dhabi, Dubai, Sharjah, Ras Al Khaimah, and Fujairah and is officially licensed from 1 May 2014 to 30 April 2019 by the Ministry of Higher Education and Scientific Research of the United Arab Emirates to award degrees/qualifications in higher education.

A number of HCT programmes of study are accredited by organisations recognised by the Council for Higher Education Accreditation (CHEA) USA. A further number are accredited by nationally-recognised organisations from Australia, Canada, the United Kingdom, and the United States. Accredited programmes of study are listed in the table below.

Please note that these programmes are being phased out to be replaced by the new range of HCT 2.0 programs. The new programs have been submitted to the UAE's Commission for Academic Accreditation (CAA) for national accreditation. International accreditation will follow the due application process soon after national accreditation is completed.

Academic Division	Accreditation - Programme of Study
Applied Communications	<p><i>The following programmes are accredited by the American Communication Association (ACA), USA up to December 2016:</i></p> <ul style="list-style-type: none"> • HD-BAS in Applied Media Studies • BAS in Applied Communications (Animation) • BAS in Applied Communications (Applied Media) • BAS in Applied Communications (Corporate and Media Communication) • BAS in Applied Communications (Fashion Design and Merchandising) • BAS in Applied Communications (Graphic Design) • BAS in Applied Communications (Video Production)

Business	<p><i>The following Business programmes are accredited by the Accreditation Council of Business Schools and Programs (ACBSP, USA) up to 2018:</i></p> <p>Higher Diploma (accredited at the level of ‘Associate Degree’)</p> <ul style="list-style-type: none"> • Business and Management (Accounting) • Business and Management (Financial Services) • Business and Management (General) • Business and Management (Human resources) • Business and Management (Marketing) • Business and Management (Travel and Tourism) • eBusiness Management <p>Bachelor of Science</p> <ul style="list-style-type: none"> • Business and Management (Accounting) • Business and Management (General) • eBusiness Management • Engineering Management
Computer Information Science	<p><i>The following programmes are accredited by the Canadian Information Processing Society (CIPS), Canada up to December 2015:</i></p> <p>Bachelor of Applied Science (One year ‘Top-up’)</p> <ul style="list-style-type: none"> • Business Information Technology • Computer Network Technology • Information Management <p>Higher Diploma / Bachelor of Applied Science</p> <ul style="list-style-type: none"> • Information Technology (Business and Information Systems) • Information Technology (Information Administration) • Information Technology (Interactive Multimedia) • Information Technology (Information Systems Security) • Information Technology (Network Engineering) • Information Technology (Software Engineering) • Information Technology (Web Development)

	<p>Bachelor of Applied Science (Four years)</p> <ul style="list-style-type: none"> • Information Systems (Business Solutions) • Information Systems (Security and Forensics) • Information Technology (Applications Development) • Information Technology (Instructional Technology and Training Management) • Information Technology (Interactive Multimedia Technologies) • Information Technology (Networking)
Engineering Technology	<p><i>The following BAS programmes with HD exit are approved by the General Civil Aviation Authority, UAE:</i></p> <ul style="list-style-type: none"> • HD_BAS in Applied Aviation Maintenance Technology (Airframe and Aeroengines) • HD_BAS in Applied Aviation Maintenance Technology (Avionics) <p><i>The following programmes are accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org:</i></p> <ul style="list-style-type: none"> • Bachelor of Applied Science • Chemical Engineering Technology • Civil Engineering Technology • Electrical Engineering Technology • Electronics Engineering Technology • Mechanical Engineering Technology • Mechatronic Engineering Technology
Health Sciences	<p><i>The following Bachelor-level programme is accredited by the Health Information Management Association of Australia (HIMAA), Australia up to July 2018:</i></p> <ul style="list-style-type: none"> • BAS in Health Information Management programme.

Academic Division	Benchmarking -Programme of Study
Education	<ul style="list-style-type: none"> • Bachelor of Education: benchmarked with the Graduate School of Education at the University of Melbourne, Australia.

Academic Framework

The Higher Colleges of Technology offers instructional programmes leading to Bachelor Degrees in: Applied Communications, Business, Computer Information Science, Education, Engineering Technology and Science, and Health Sciences.

Course Credit Definition

HCT course credit units are granted in recognition that a course of study has been successfully completed as per the requirements of the relevant course outline.

The number of credit units assigned to each course is based on the amount of time that students are expected to spend under supervised delivery as well as independent study of the content in order to achieve learning outcomes. For example: a standard Bachelor-level course is assigned 3 credit units*, but this may vary based on the specific learning outcomes of the course, and the associated requirements from the students, or other factors.

The set number of credits for each course is specified in the course outline. Most courses are one semester long which, if completed with a passing grade, carry the number of course credit units as specified. Some courses are two semesters long, and credit units are awarded only upon the satisfactory completion of both semesters. Credit may not be given for completing the first semester only of a year-long course.

Graduation Requirements

This framework provides a pattern that accommodates academic programme requirements, a reasonable, substantive general education component, sensitivity to the learning needs of our students and feasibility.

Bachelor Degree

To earn a Bachelor Degree from the HCT, a student must:

1. Have a minimum cumulative GPA of 2.0 in the overall baccalaureate coursework.
2. Complete at least 120 credit units including:
 - a. 10 General Studies courses in specified areas;
 - b. a minimum of 60 units in a programme major.
3. Complete all required courses for a programme major.

Higher Diploma Exit Option

To earn a Higher Diploma from the HCT, a student must:

1. Have a minimum cumulative GPA of 2.0
2. Complete at least 90 credit units including:
 - a. required General Studies courses;
 - b. required core and elective units within a programme major.
3. Complete all required courses for a programme major.

Diploma Exit Option

To earn a Diploma from the HCT, a student must:

1. Have a minimum cumulative GPA of 2.0
2. Complete at least 60 credit units including:
 - a. required General Studies courses;
 - b. required core and elective units within a programme major.
3. Complete all required courses for a programme major.

The Qualifications Framework for the Emirates (QFE)

The Bachelor and Diploma programmes have been aligned with the National Quality Framework of the Emirates. The QF Emirates is the UAE's national Qualifications Framework (termed the "Qualifications Framework for the Emirates" (QFE) to distinguish it from other countries). The QFE Framework also provides detailed information on the level of knowledge, skills, and competencies required of graduates in the UAE. The specific levels of learning attained by HCT graduates in the QFE Framework are mapped against the appropriate QFE levels.

Handbook available at: <http://www.aurak.ac.ae/media/document/QF-Handbook.pdf>

* One credit Unit equals not less than 15 hours per semester.

Level	Generic Nomenclature	Principal Qualification titles used in the QF Emirates (each with its own profile)		
		Vocational Education and Training (VET)	Higher Education (HE)	General Education (G 12 – GE)
10	Doctoral Degree	—	Doctoral	—
9	Master Degree	Applied Master	Master	—
8	Graduate Diploma	Applied Graduate Diploma	Postgraduate Diploma	—
7	Bachelor Degree	Applied Bachelor	Bachelor	—
6	Diploma	Advanced Diploma	Higher Diploma	—
5	Diploma / Associate Degree	Diploma	Associate Degree	—
4	Certificate	Certificate 4	—	Secondary School Certificate (G 12)
3	Certificate	Certificate 3	—	TBA
2	Certificate	Certificate 2	—	—
1	Certificate	Certificate 1	—	—

Source: QF Emirates handbook

The Learning Model

The UAE Government is committed to 21st century nation-building through the provision of cutting-edge education to all Nationals who want to develop their potential.

The HCT aims to be a key educational pillar on which the modern nation is built. The HCT Learning Model is a strategic framework through which the HCT mission is attained.

The HCT Learning Model is based on the following professional values:

- innovative practice;
- continuous improvement;
- professional integrity;
- efficiency and effectiveness;
- responsiveness to the needs of stakeholders.

It sets standards for the design of curricula, gives principles which should be followed in teaching and learning, and guidelines for assessment within the HCT.

The Learning Model defines the HCT's educational philosophy and identifies eight graduate outcomes:

Graduate Outcome One: Communication and information literacy

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- communicating information, opinions, concepts and ideas effectively in English and Arabic through the spoken and written mediums to a variety of audiences;

- selecting, understanding, evaluating and making effective use of information from a variety of sources presented in both spoken and written form in English and Arabic; and
- acting ethically in the use and presentation of information from a variety of sources.

Graduate Outcome Two: Critical and creative thinking

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- evaluating and analysing knowledge and information;
- identifying and understanding problems; and
- demonstrating creativity and innovation in problem-solving.

Graduate Outcome Three: Global awareness and citizenship

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- recognising and analysing ethical dilemmas, and practicing ethical decision-making;
- recognising and analysing the issues affecting the UAE society, regional and global environment;
- recognising and analysing the interrelations between the UAE, regional and global contexts and cultures; and
- recognising the role of the leaders of the UAE in developing the social, cultural, economic and political aspects of the nation.

Graduate Outcome Four: Technological literacy

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- recognising the influence of technology upon individuals and society; and
- using technology to perform effectively in their personal and professional lives and acting ethically when using technology.

Graduate Outcome Five: Self-management and independent learning

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- reflecting on and evaluating their own learning;
- working independently; and
- demonstrating a positive work attitude and effective work habits.

Graduate Outcome Six: Teamwork and leadership

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- understanding the functions and dynamics of groups;
- contributing effectively to teamwork;
- acting effectively in a leadership role; and
- demonstrating confidence and social maturity in interpersonal relationships.

Graduate Outcome Seven: Vocational competencies

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- applying profession-specific knowledge required for successful employment in their chosen field;
- applying profession-specific skills required for successful employment in their chosen field; and
- demonstrating the specific attributes required for successful employment in their chosen field.

Graduate Outcome Eight: Mathematical literacy

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- applying relevant numerical analytical tools to solve problems in authentic contexts; and
- analysing and communicating mathematical concepts with confidence in authentic contexts.

Through its learning model, academic staff are committed to providing educational experiences that will transform school leavers into HCT students who will graduate with the knowledge, skills and attributes to effectively contribute to the nation-building process and to help them develop a sense of personal and social responsibility.

The educational experiences that the HCT provides ensure that HCT students:

- are capable of graduating from their chosen programme with academic integrity;
- are deserving of respect and equally capable of respecting others;
- can be active contributors to nation-building;
- are responsible and accountable for their actions;
- act ethically;
- learn more effectively in applied learning environments;
- are able to communicate effectively using English and Arabic;
- are technologically literate;
- are mathematically literate;
- are able to work independently and collaboratively; and
- are able to think critically and creatively.

Academic Learning Resources

Libraries

HCT libraries are among the best equipped in the Gulf region, housing extensive collections of print and electronic resources. HCT libraries provide access to advanced information and learning technologies. Library users can search the HCT web-based library catalogue to locate and access library materials housed at all 17 libraries within the system. All library resources are accessible at <http://libraries.hct.ac.ae>. The HCT library collection resources include:

- over 357,730 print titles, 406,045 eBooks, 70,262 eJournals and 127 (programme-specific and general) databases;
- local and international newspapers, magazines and journals (print);
- annual reports from government and industry;
- instructional resources (including online);
- DVD's, fiction and non-fiction;
- access to high-performance computers; and
- streaming video facilities, for campuses and classrooms (at selected campuses).

HCT students and staff also have access to over 350,000 books via LIWA (<http://liwa.ac.ae>). LIWA is a shared catalogue of all federally funded UAE higher education institutions (HCT, United Arab Emirates University and Zayed University).

Librarians and associated library staff are essential resources who assist students and faculty in learning, teaching and research. Each library also provides individual and group instruction on topics ranging from general information, literacy skills, guiding library patrons to relevant resources in specific areas of study, and undertaking academic research.

Independent Learning Centres

The Independent Learning Centres' (ILCs) mission is to provide an enriched environment that extends beyond the classroom learning to support students. The ILC staff provides students with a rich set of individualised learning opportunities, including face-to-face and self-paced on-demand digital content. The ILC programme caters for individual differences and learning styles that support a variety of student learners.

eTextbooks, resource books and laboratory materials

HCT has made the commitment to become the pre-eminent

technology-supported higher education institution in the UAE. All current students are provided with resources appropriate to their programme and year of study that support learning in and out of the classroom consistent with the Mission and Goals of HCT. These resources may include:

- eTextbooks and other interactive electronic resources as selected by the teaching faculty; and
- discipline specific resources (e.g., software).
- additional resources to support student learning provided by the campus or division including materials, equipment and tools required for laboratory and other practical instruction (e.g. including discipline-specific clothing/uniforms, hard hats, protective boots, etc. which then become the property of the student).

Internet Access

The HCT internet access and electronic mail services are provided under the authority of the Chancellor and the Vice Chancellor of the HCT in accordance with federal laws and regulations governing the use of these services. Users of the internet are governed by the HCT Internet Access and Electronic Mail Policy. Provision of access to internet resources and services is intended to support the need for HCT graduates to develop the computer and information-seeking skills that are essential for the workplace and for lifelong learning.

Students are expected to equip themselves with tablet computers and/or laptops required to support their learning.

Copyright Policy and Guidelines

The main objectives of the HCT Copyright Policy and Guidelines are:

- to ensure compliance with the provisions of UAE Federal Law No. 7, 2002;
- to establish and protect HCT ownership of all HCT produced materials;
- to provide guidelines in determining the application principles for interpretation of the law.

The HCT acknowledges that the Ministry of Information and Culture is regarded as the definitive source of information on matters involving intellectual property rights.

HCT Services and Resources for Students

Student Services

Student Services at the HCT campuses involve the colleges' Academic Registry Services and Student Services departments, which work closely with Central Student Support Services. These departments ensure the academic integrity of HCT credentials, as well as students' access to a supportive campus environment. The departments' roles help to promote all students' personal well-being and academic success, as well as to prepare them to contribute to the ongoing development of the UAE.

The College Academic Registry Services departments provide all record-related services from admission, registration, official transcripts, course and examination schedules, student timetables and verification of graduation eligibility up to final credential award.

The College Student Services departments are responsible for supporting the different aspects of student life, starting with new student recruitment and orientation. The staff assist with financial aid services, student behaviour, discipline and attendance issues, safety and security, counselling services, wellness and any special needs accommodations. They give guidance to students organising student councils, peer tutoring, extra and co-curricular athletic and recreational activities as well as clubs and other special events. They also provide career services and organise alumni activities.

Alumni Association

There is an HCT Alumni Association which graduates are welcome to join. This association:

- helps graduates stay connected to each other;
- keeps graduates informed about the HCT international and national conferences and events;
- provides opportunities for lifelong learning;
- allows graduates to sign up for voluntary support; and
- provides career advice and opportunities with a directory of employers

Career Services

The HCT Career Services are staffed by specialists in career management and counselling, which place strong emphasis on career development in a constantly changing global workforce.

The activities of the HCT Career Centres include:

- assisting students to make informed career decisions, and provide career assessment opportunities;
- providing one-to-one counselling to help students match their interests with suitable careers;
- building relationships between the HCT, employers and business communities;
- organising career-centred events, including summer orientation sessions for high-school students;
- posting employment listings received from employers in both the private and public sectors;
- assisting students in the search for employment and liaising between employers, graduates and students; and
- providing student-focused workshops on topics such as career planning, developing a positive professional attitude, CV and resume writing as well as job interview techniques.

Counselling Service

The HCT provides personal and academic counselling to help students with their classroom performance or social adjustment at the campus.

Campus Counsellors are available to meet students who are having academic or personal problems that interfere with their classroom performance or social adjustment. Counsellors can help students find solutions to their problems and facilitate academic and personal growth.

Students are assigned an Academic Adviser at the start of each academic year. The adviser is usually a class teacher who will give academic advice and monitor progress.

Extra-curricular Activities

During the year, a wide variety of physical, social and cultural activities are available to interested students. Students are encouraged to make every effort to participate in these activities, which are designed to supplement and complement their classroom work, enhance their experience at the HCT, and provide a healthy balance in life.

In many cases, students organise or coordinate campus events such as film festivals, athletic and recreational competitions, health and wellness days, heritage and cultural displays, art shows and career fairs. These events develop individual and group initiatives, teamwork and leadership

skills. They provide the students with the opportunity to apply the skills they have learned, to support charitable causes and to demonstrate academic achievements.

Safety and Security

The HCT is concerned that all individuals the students meet are properly authorised to enter the campuses. All HCT campuses have security gates, with security personnel stationed at each entrance. These security officers allow only those who are properly authorised to enter the campus.

Security officers have the right to prevent female students from leaving the campus without permission, and to carry out random checks on student and staff vehicles.

All HCT security officers are appointed for the safety of the staff and students of the campuses, and should be treated with proper respect.

Fire Drills

In case of fire, each campus has procedures to follow. Students should learn the locations of emergency exits, fire alarms and fire extinguishers. In the event of a fire drill or emergency, students must follow the directions of teachers or security personnel.

Medical Cases

If a student is seriously ill and needs help, the teacher will call Student Services who will provide assistance and contact their family. An ambulance will be called if necessary.

Student Councils

Each campus has a Student Council to give the student body an effective means for providing input to the colleges so as to improve overall student life. The Student Councils are composed of students from the campuses, thus providing many opportunities for student growth and leadership development such as:

- planning and organising student activities;
- developing closer relationships between students and faculty;
- establishing a better atmosphere for learning;
- informing the campus of student needs and recommendations;
- developing leadership qualities; and
- improving student morale.

The name and organisational structure of councils and their membership may vary from campus to campus.

Student representatives from all the campuses also meet to elect a system-wide HCT Student Council. This committee represents the wider HCT student body, inside the country as well as abroad.

Students with Special Needs

Under the conditions outlined in HCT policy, reasonable academic accommodation is provided for students with special needs.

Students with special needs (e.g. physical, medical or learning difficulties) are eligible for appropriate support which could take the form of special equipment or materials, or additional time to complete course requirements. Students are required to provide appropriate medical documentation detailing their special need.

It is important that students contact the Student Services office at their campus as early as possible in order to obtain the necessary support.

Financial Aid

The HCT recognises that some students may need assistance with meals and transportation costs. Students who require such assistance are encouraged to contact their campus Student Services Supervisor or Campus Counsellor for details regarding financial aid.

Student Services can also assist in various ways, such as helping to organise temporary employment or providing equipment.

In addition, the HCT forms partnerships with employers who can provide opportunities to sponsor students to complete regular programmes. Sponsored students progress towards graduation with the support of employers in return for commitments specified in the sponsorship agreement.





كليات التقنية العليا
HIGHER COLLEGES OF TECHNOLOGY

HCT
2.0

ACADEMIC POLICIES

A full listing of HCT Academic Regulations and Policies containing links to related procedures and documents is available in the electronic version of the Catalogue available at:
www.hct.ac.ae

Key Terminology

Credit Hour: A unit that measures educational credit that is usually based on the number of hours students are in the classroom.

A lecture-based course, whose duration is a full semester (at least 15 weeks), the course requires a minimum of one classroom hour (50 minutes) to 1 credit hour plus 2 hours of homework for a total of 3 hours. Total classroom hours must include at least 45-64 hours regardless of the duration of the term.

For courses that include a laboratory section, generally there are two hours of classroom laboratory time spent for each credit hour, based on a minimum 15-week semester. Total classroom laboratory time must include at least 30 hours regardless of the duration of the term.

Workplacement courses, including practicum and internship courses, students are required to spend 60 hours at their work site for each credit hour awarded.

Concentration: A concentration is a sub-specialisation within the field of study of the major. A concentration requires a minimum of 15 credits.

Major: A major is the field of study in which a student specialises. A major requires a minimum of 30 credits.

Minor: A minor is a specialisation outside of the field of study of the major. A minor requires 12-18 credits.

Academic Programme

LP228 Recognition of Prior Learning

1.0 Rationale

Learning is a lifelong activity. The Higher Colleges of Technology (HCT) recognises that students learn in a variety of ways, some of which take place outside the regular classroom or the HCT by granting credit, as appropriate, for prior learning at or outside the HCT, or outside the enrolled programme.

2.0 Terminology

Prior Learning is a process used to evaluate learning acquired outside the classroom for the purpose of assigning academic credit.

3.0 Policy

3.1 A student may obtain credit towards graduation through the recognition of prior learning.

3.2 Credits for prior learning may not be granted to courses which in total exceed

- 50% of the total credential programme credit
- 25% of the final two years of 3 or 4 year credential programmes, and/or
- 25% of the final year of 2 year credential programmes
- Foundation courses cannot be challenged

3.3 Credential students may be given credit for prior learning by:

3.3.1 Exemption (EX)

Courses successfully completed in other HCT programmes

3.3.2 Transfer Credit (TR)

Courses completed at Zayed University or UAE University.
Note: Successful completion of UGRU at UAE University or Academic Bridge at Zayed University is accepted for direct entry to an HCT credential (see LP213)

Courses completed at other UAE institutions accredited by CAA

Courses completed at overseas institutions accepted as being of equivalent standing

Qualifications from professional bodies

International programme examinations such as GCSE (UK), International Baccalaureate, etc.

3.3.3 Experiential Learning (EL)

Work or life experience such as structured internships,

volunteer work-travel, self-study, or training

3.4 Credit based on prior learning is awarded on the basis of: System-approved exemptions and transfer credits as posted in HCT Policy or Procedures.

Approval by the campus Associate Dean, on consideration of the recommendation of the appropriate campus Programme Chair and Faculty.

3.5 Prior learning should have occurred within five years of the request for transfer credit.

4.0 Stakeholder Impact and Scope

This policy applies to all students enrolled in credential programmes leading to the award of a Higher Colleges of Technology credential.

5.0 Related Documents

LP213 Inter-institution Student Transfers

LP228.1 Recognition of Prior Learning Procedure

6.0 Approval and Review

Policy Officer: Deputy Vice Chancellor – Academic

Reviewed and Uploaded by (Dept.): Academic Programmes

Approved as Policy by: Vice Chancellor

First Date Published: 30 June 2007

Last Date Reviewed: 16 September 2013

Last Date Published: 16 September 2013

Archive Date:

Note: All policies and procedures are reviewed annually.

LP237 English Language Requirements

1.0 Rationale

This policy governs the English language requirements for all students for the purposes of entry to, progression through, and graduation from credential programs at the HCT.

2.0 Terminology

BAS: Bachelor of Applied Science Program (4-year credential offered by the HCT)

CEFR/CFR: Common European Framework of Reference. The framework is used by the HCT to compare the English

proficiency of students with a common standard.

CEPA: Common Education Proficiency Assessment. Tests developed and supervised by the National Admissions and Placement Office (NAPO) for all 12 year grade students seeking higher education in the UAE.

IELTS: International English Language Testing System. A test of English language proficiency used to satisfy entry requirements to credential programs.

3.0 Policy

Students must meet the relevant English language requirements as set out below:

3.1 Applied Diploma and BAS Programs Entry Requirements:

- CEPA 180, or
- IELTS (Academic Module) overall band 5, or
- an accepted equivalence (see LP237.1).

3.2 Program Progression Standard

Year Four in Education BAS:

All Education BAS students are required to have overall IELTS Band 6.0 to enter the final year of the Education BAS program.

- Bachelor of Education: Early Childhood Education
- Bachelor of Education: Educational Technology

- of Education: English Language Teaching in Schools
- Bachelor of Education: Primary Education

4.0 Stakeholder Impact and Scope

This policy applies to all students who seek entry to or are enrolled in HCT credential programs as of the effective date.

The DVCAA shall ensure compliance with this and related policies

Note: All policies and procedures are reviewed annually.

Admission and Enrolment

LP202 Admission Policy

1.0 Rationale

To ensure equitable treatment of applicants, this policy establishes common standards for application, admission, confirmation and placement into programs at the Higher Colleges of Technology.

To implement the Admission Priority Categories for funding students at the federal universities and colleges established by the Ministerial Council for Services Decision No.(6/1/6) of 2013, Session No.(1)

2.0 Terminology

Admission Priority One (First Category): Current High School graduates, continuing students, internal transfers, returning students, and students whose admission or continuation was deferred solely due to National Service.

Admission Priority Two (Second Category): A non-current High School graduate who has never been counted in the funding census at any federal higher education institution.

Admission Priority Three (Third Category): Former students of federal higher education seeking re-admission who are neither admission priority one or two students. This includes students who have graduated previously from federal higher education and wish to return for additional qualifications.

Applicant: An eligible person seeking enrolment at a federal institution of higher education.

Application Cancellation: An application cancelled by the applicant.

Approved: An applicant that NAPO has determined meets the admission criteria for the institution they applied to.

Continuing Student: A federal higher education student who was registered in the previous semester and is also registered in the current semester in the same institution.

Current High School Graduate: An applicant who has successfully completed the UAE Grade 12 Certificate exams to the required standard or hold equivalent qualifications in June of the current year.

Dismissed: A student who has been dismissed from the institution for academic or disciplinary reasons.

Enrolled and Not Registered: A student who was registered

in the previous semester, is not registered in the current semester, and did not graduate, get dismissed, suspended or withdrawn.

Enrolled Student: A student who has been approved by NAPO and been enrolled by one of the three federally funded higher education institutions.

Enrolment Cancellation: An enrolment that is cancelled because the student did not register.

Former Higher Education Students: A student who was registered and funded at any federal higher education institution at any time in the past and is currently not a continuing or returning student. This includes completers of qualifications who left higher education and are applying to return for another qualification at a higher level.

Funding Eligible Student: A registered student found by the State Audit Institution during the student count audit to be eligible for federal funding.

Graduate: A student who has successfully completed all the requirements in a program and has been awarded a credential. in the previous semester and is not registered in the current semester.

Internal Transfer Student: A higher education student who was registered in a federal institution of higher education the previous semester, or has had a gap in registration of not more than one year, and is returning to a different institution than the one previously enrolled in.

New Student: A registered student in their first semester of registration following admission. These are tracked by admission priority categories 1, 2 and 3.

Not Approved Applicant: An applicant that NAPO has determined does not meet the admission criteria of the institution they applied to.

Not Enrolled Applicant: An approved applicant who is not enrolled by the higher education institution they applied to.

Not Funding Eligible: A registered student who is not eligible for federal funding as determined during the student count audit.

Non-Current High School Graduate: An applicant who has successful completed the UAE Grade 12 Certificate exams to the required standard or holds equivalent qualifications prior

to the current year, or completed the GSC re-sit exam during a prior academic year. These applicants have not been counted in any prior funding census at any federal higher education institution in the past.

Re-Entry/Returning Student: A higher education student who is returning to the same institution from a gap in registration of not more than one year. The student has had a break in registration of not more than two consecutive regular semesters of study. Fall and Spring are the regular semesters of study. Summer and other short semesters are excluded.

Registered Student: A student who is registered and attending class.

Registration Cancellation: A student whose registration is cancelled because they have exceeded the absence maximum in all courses on the student count audit date.

Suspended/Postponed: A student whose registration has been suspended or postponed for up to one year, either at their own request or as imposed by the institution.

Direct Entry: Admission directly into an HCT credential program.

Minimum Academic Requirements for Program Entry: Minimum levels of proficiency in English and Mathematics.

3.0 Policy

3.1 Admission Requirements

3.1.1 Admission Eligibility Evidence Requirements

UAE Nationals are eligible for admission to the Higher Colleges of Technology (HCT), provided that they meet all of the following four criteria:

1. Possess a valid UAE National ID card, and a valid UAE passport (or other passport if mother is UAE passport holder) if enrolled in a federally funded credential program.
2. Have reached 17 years of age before the start date in the academic year of admission.
3. Possess a valid medical certificate.
4. Have completed the Common Educational Placement Assessment (CEPA English) with a minimum of 150, and have passed the government secondary General School Certificate, (GSC) with a minimum average of 70, OR, have completed the Common Educational Placement Assessment (CEPA English) with a minimum of 160, and have passed the government secondary General School Certificate, (GSC) with a minimum average of 60.

Applicants are required to submit evidence of eligibility to

NAPO before being granted admission to HCT.

3.1.2 The admission of an Eligible Applicant is subject to:

- Compliance with the admission procedure as prescribed by the HCT Campus to which the applicant seeks admission.
- Enrolment priority as outlined in GP600 Enrolment Planning Policy and Procedure, and
- Approval by the Chancellor of the HCT.

3.2 Entry into HCT programs is dependent upon the student meeting the minimum academic requirements for program entry. Eligible applicants who do not meet the requirements for HCT programs are placed into Foundations.

3.3 HCT Admission Approval

3.3.1 Approved Applicants are those who have completed the application procedure at NAPO, who meet the HCT general admission and admission priority requirements, (where needed), and who have been approved by the Chancellor of the HCT.

3.3.2 The Chancellor confirms the date of the ceremony at which he approves the applicants list each year.

3.3.3 Approved Applicants must confirm acceptance of the offer of admission by the confirmation deadline listed in the HCT Academic Calendar.

3.3.4 Applicants who confirm acceptance, but are 'no shows' as of the end of the add/drop period in the semester of admission forfeit the offer and must apply for re-admission, (non-current status), in order to enroll in a subsequent semester.

3.3.5 Inter-Institutional Transfers, re-admissions and non-current applicant approvals will be finalised in order of priority after the confirmation of the approved current applicants.

3.3.6 Admission must be completed before the close of the add/drop period of the relevant semester. 3.4 Enrolment after an Interruption

Students who wish to enrol after an interruption or graduation are classified by their campuses under one of the following statuses. Enrolment holds are placed on all students in the categories below, with the exception of those on deferred status.

Deferral (returning student, Admission Priority Category 1)

Applicable for:

- Students who withdraw from, or fail a course or set of

courses in a given semester and must wait to repeat the course or set of courses in a subsequent term.

Note: The deferral can span up to two consecutive semesters, after which a re-enrolment hold is applied. Deferred students who re-enrol before the expiration of the deferral period are not required to apply for re-enrolment. The maximum deferral period is from the semester in which the failure or withdrawal occurred until the add/drop period of the second subsequent semester.

Re-admission (former student Admission Priority Category 3)

Applicable for:

- Students who deferred enrolment but who did not enrol before the expiration of the deferral period, or
- Students withdrawn without deferral in a given semester who did not return to enrolled status in the following semester.
- Students who were awarded an HCT credential and seek another at a higher level and did not return in the following two consecutive semesters

Re-instatement (returning student Admission Priority Category 1 or former student, Admission Priority Category 3)

Applicable for:

- Students who previously were required by their college to withdraw without deferral from their program, for academic or other reasons and have applied to resume their studies.

Approvals for enrolments after an interruption are confirmed in order of priority, as defined in GP600 Enrolment Planning Policy and Procedure.

4.0 Stakeholder Impact and Scope

This policy applies to all applicants who seek admission into the System of the HCT.

The DVCAA shall ensure compliance with this and related policies

LP239 Foundations Studies Policy

1.0 Rationale

The purpose of this policy is to govern admission, placement, progression and completion for Foundations Studies at all campuses.

The Foundations Intensive Program was developed to better serve the mission of the Higher Colleges of Technology, the demands of industry, and the workforce requirements of the

UAE. It FIP aims to place all qualified and dedicated students into a degree program within one year from date of entry.

The academic year of the Foundations Intensive Program consists of five cycles. Students are initially placed into one of four Levels of ability, and have an opportunity to progress to the next level at the end of each cycle (Table 1).

2.0 Terminology

CEFR: The Common European Framework of Reference for Languages is used by the HCT to compare the English proficiency of students with a common standard.

Foundations Length of Placement: based upon the level of placement, the number of cycles required for a student to complete Foundations.

3.0 Policy

3.1 Admission

Students who meet eligibility requirements for admission to HCT but do not meet entrance requirements for a Bachelors Programme according to HCT Admission Policy (LP202) may be placed into the Foundations Programme.

3.2 Placement

Foundations students are placed into one of four levels of English (and into mathematics courses, if needed), according to LP202 Admission Policy and related procedures. Each English and Mathematics course is designed to be completed in one cycle.

3.3. Length of Placement

There is no limit to the number of times a student may repeat a given level up to the total duration limit of 5 cycles. Even students who do not progress to a higher level during the year will be afforded a maximum of 5 cycles (1 year) to achieve the IELTS score necessary for degree program entry.

3.4 Assessment

All Foundations courses have a Final Exam and/or Practical Skills Assessment which is common to all Colleges. The rest of the final course grade is based on coursework tasks assigned by the Colleges within the parameters of the Course Outline Assessment Strategy.

3.5 English Progression

Progression occurs only at the end of each cycle. In Levels 1, 2 and 3, in order to progress to the next level, a student must achieve an overall course grade of 60% or higher. If the student achieves a course grade of 85% or higher, the student may progress two levels (e.g. from Level 1 to Level 3, or Level 2 to Level 4). This is known

as “Exceptional Progression.” Only students in Level 1 and Level 2 can progress via Exceptional Progression; students in Level 3 and Level 4 cannot.

Level 4 students must achieve the BAS entry requirements in order to enter a BAS program.

If a student does not meet the criteria for progression at the end of the cycle, the student must repeat the same level during the next cycle.

3.5.1

Table 1: Expected CEFR:

CEPA Entry	Level	Expected CEFR at Entry	Expected CEFR for Progression
Below 156	1	A1-A2	A2+
156	Level 2	A2+	B1
163	Level 3	B1	B1+
170	Level 4	B1+	B2
180	BAS	B2	--

3.6 Completion

After placement in the Foundations Studies Programme, students may complete the program at any level by satisfying the expected CEFR for BAS entry (see Table 1). Admission to the BAS program is contingent upon satisfying program entry requirements (see LP202 and LP202.1).

4.0 Stakeholder Impact and Scope

This policy applies to all students wishing to gain entry to a Bachelors Program via the Foundations Studies Programme. However, certain Bachelor Programs may have additional entry requirements.

The DVCAA shall ensure compliance with this and related policies

Registry

LP205 Duration of Study

1.0 Rationale

It is common practice for higher education institutions to require that work towards a particular credential or major be achieved within a set period of time, because knowledge in particular fields changes, and learning often involves building knowledge from idea to idea and from course to course. It is also important that students progress through programs in a timely manner for practical resource reasons.

2.0 Terminology

Duration of Study: The maximum time a student is allowed to complete a particular program or major.

3.0 Policy

A student is required to complete his/her study at the HCT within the allowed Duration of Study.

Once enrolled in a credential program, a student is allowed an additional four consecutive semesters, excluding summer sessions, above the program length stated in the student's Catalogue Term, in which to complete his/her studies. Program length plus the additional four semesters equals the Duration of Study. This also applies to students who are reinstated after academic dismissal.

Duration of Study for the Foundations Intensive Program is one year.

A student will be subject to dismissal upon academic grounds if he/she exceeds the Duration of Study without being granted an extension.

A student with extenuating circumstances that will require him or her to exceed the Duration of Study may apply for an extension. The application must be submitted no later than 3 months prior to the end of the Duration of Study period, and, if granted, the extension period begins in the semester immediately following the end of the normal Duration of Study. An extension is normally limited to two consecutive semesters. A student may apply for an extension only once.

The Duration of Study period allowed for inter-institution transfer students will be determined on an individual basis.

4.0 Stakeholder Impact and Scope

Program Chairs, Executive Deans, Student Advisors and Faculty, in advising students who are deferred, re-enrolled,

re-instated, or re-admitted need to be aware of the policy and advise accordingly.

Student sponsors should be informed students may not be able to graduate if they do not complete their program within the Duration of Study.

The DVCAA shall ensure compliance with this and related policies

LP208 Academic Standing – Undergraduate Programmes

1.0 Rationale

To enhance and maintain the integrity of the HCT credential and to be consistent with academic probation and academic dismissal policies common in higher education.

2.0 Terminology

Academic Dismissal: Termination from HCT for academic reasons.

Academic Standing: An indicator of a student's progress in a program, normally based on Grade Point Average (GPA).

3.0 Policy

3.1 Credit Bearing Courses and Programmes

1. A minimum Cumulative GPA of 2.0 is required for graduation. Appeals to the GPA graduation requirement will not be accepted.
2. A student is in good academic standing if s/he maintains a program grade point average of 2.0 or higher.
3. A student is placed on academic warning if his/her semester grade point average is below 2.0 but his/her Cumulative grade point average is above 2.0.
4. A student is placed on academic probation if his/her Cumulative grade point average falls below 2.0. The student then has two further semesters on academic probation to attain a Cumulative grade point average of 2.0 and return to good academic standing.
5. If a student does not attain a Cumulative grade point average of 2.0 after two semesters on academic probation, s/he is subject to academic dismissal.
6. If a student does not attain a program grade point

average of 2.0 at the end of his final semester of studies, s/he is subject to academic dismissal and will not qualify for graduation.

7. If a student seeks to transfer to another program while on academic warning or academic probation, s/he has two semesters in the new program to attain a Cumulative grade point average of 2.0. If s/he does not achieve a Cumulative grade point average of 2.0 at the end of the second semester of the new program, s/he is subject to academic dismissal.

3.2 Non-Credit Bearing Courses and Programs (Foundations)

1. In programs which do not bear credit, required courses must have a passing grade in order for a student to progress.
2. A student who receives a grade of F must repeat the course.
3. There is no limit to the number of times a student may repeat a given level up to the total duration limit of 5 cycles. Even students who do not progress to a higher level during the year will be afforded a maximum of 5 cycles (1 year) to achieve the IELTS score necessary for degree program entry.
4. Learning Contracts are not permitted at the HCT.

4.0 Stakeholder Impact and Scope

Academic Services at HCT Colleges need to identify and categorise students to whom this policy applies.

Students and sponsors should be informed that students may not be able to graduate or will be withdrawn from a program if they do not meet the requirements under this policy.

The DVCAA shall ensure compliance with this and related policies.

LP209 Grading System

1.0 Rationale

The grading system is designed to achieve consistency with broad international practice. The numerical consistency across all grades will also ensure validity in statistical analysis.

2.0 Terminology

Cumulative Grade Point Average (CGPA): A numerical value derived from final grades on all courses attempted within a credential. It is calculated based on all courses completed in the program major which count towards program compliance requirements and are not excluded from GPA calculation.

Grade Point Average (GPA): A numerical value derived from final grades on all courses attempted which is recorded on the student's transcript.

Grade Report: An unofficial transcript that shows the student's grades in all courses taken to date.

Semester GPA: The semester grade point average is based on all courses attempted within a semester, excluding experiential learning courses (e.g., , courses graded P/F, advanced standing grades (CH, EX, TR) and grades with an asterisk (*).

Successful Completion of Course: When a student has demonstrated, through the assessment methods prescribed by the course instructor, achievement at the minimum level defined for the course based on the HCT Grading policy, of all the learning outcomes which make up a course.

Transcript: An official report issued to other educational institutions, and/or employers, that shows the student's grades in all courses taken to date.

3.0 Policy

- 3.1 Students enrolled in courses in HCT programs will be reported in terms of the following grades. The grade point average (GPA) is tabulated at the end of every semester based on the following grading system.

Descriptor	Grade	Grade Points	Range
Achievement that is outstanding relative to the course and GPA requirements.	A	4	90 – 100
	A-	3.7	87 – 89
Achievement that is significantly above the course and GPA requirements.	B+	3.3	84 – 86
	B	3	80 – 83
	B-	2.7	77 – 79
Achievement that satisfactorily meets the course and GPA requirements.	C+	2.3	74 – 76
	C	2	70 – 73
Achievement that minimally meets the course requirements but may not meet the GPA requirements.	C-	1.7	67 - 69
	D+	1.3	64 - 66
	D	1	60 – 63
Achievement that does not meet requirements.	F	0	0 – 59
A letter grade (A-F) followed by an asterisk is not computed in the GPA.	grade*	N/A	Uncalculated
Achievement that meets the course requirements, in courses graded pass/fail, but is not computed in the GPA.	P	N/A	Pass
Achievement that does not meet course requirements, in courses with pass/fail grading mode.	FL	N/A	Fail
A notation that indicates a course is taken without credit.	AU	N/A	Audit
A notation that indicates a course which is more than a semester in length, is continuing.	CC	N/A	Continuing Course
A notation that indicates a student has been granted credit.	CH	N/A	Challenge
A notation that indicates a student has been granted credit based on work or life experience, such as structured internships, volunteer work, travel, self-study, or training.	EL	N/A	Experiential Learning
A notation that indicates the student has been exempted from a course requirement on the basis of equivalent attainment other than transfer credit.	EX	N/A	Exemption
A temporary grade that indicates the student has not completed all course requirements for medical reasons, or for extenuating personal circumstances such as bereavement.	I	N/A	Incomplete
A notation that indicates the student is currently enrolled in the course.	IP	N/A	In Progress
A notation that indicates that no final grade will be recorded for the course.	NG	N/A	Not Gradable
A temporary notation that is assigned if the grade is not submitted by the last day of the semester.	NS	N/A	Not Submitted
A notation that indicates the student has been granted credit for equivalent courses at another accredited institution.	TR	N/A	Transfer Credit
A notation that indicates the student did not meet all learning outcomes.	U	N/A	Unclassified
A notation that indicates the student has withdrawn during the time period allowed for withdrawal without penalty.	W	N/A	Withdrawal

- 3.2 A course in which grade A, A-, B+, B, B-, C+, C, C-, D+, D, P, CH, EL, EX, or TR is received is counted towards program compliance requirements.
- 3.3 Notations AU, CC, CH, EL, EX, I, IP, NG, NS, P, TR, U and W carry no grade points and are excluded from all grade-point computations.
- 3.4 An I grade may be assigned if the performance in a course is satisfactory, and has been of passing quality but is incomplete for reasons beyond the student's control, e.g. medical or personal extenuating circumstances.
- 3.5 All grades except I, IP, and NS are considered final.
- 3.6 In exceptional circumstances, a grade may be changed as a result of re-evaluation of the student's work if the appeal is made and approved within six months of the original grade submission.
- 3.7 Under no circumstances will a grade be changed after six calendar months has passed from the date of entry of the original grade, unless to correct an institutional error.
- 3.8 Where the HCT grading system and/or grade change regulations are inconsistent with that required by the accreditation body for a specific program, the grading system of the accreditation body takes precedence over the HCT grading system.

4.0 Stakeholder Impact and Scope

All students, faculty, program managers and Academic Services staff need to be aware of the grading system.

New students need to be informed of the grading system when joining the HCT.

LP234 Graduation Policy

1.0 Rationale

To define the policy and framework for all matters relating to HCT's graduation requirement, including academic requirements, Graduation Ceremony and awards.

2.0 Terminology

Awards, Scholarships and Memberships: Awards, Scholarships and Memberships are awarded to students and graduates who demonstrate excellence in particular spheres.

Graduate: A student who has successfully completed all the requirements in a programme and has been awarded a credential.

Graduation Eligibility Period: The period within which a student is eligible to graduate and to participate in the HCT official graduation ceremony. This period starts on the first day

and ends on the last day of each academic year, including the optional summer session.

Potential Graduates: All students who are registered in courses in the final semester of their programme, and are subject to passing these courses and meeting all graduation requirements will be eligible to graduate.

Student Self Service: The Student Self-Service system on the HCT web-based College management and record system through which students access their academic information.

3.0 Policy

- It is the responsibility of the Student Records Custodian to identify all potential graduates to the System Registrar.
- To qualify for a Higher Colleges of Technology credential, a student is required to successfully complete the required number of credits and courses specific to the programme major of the programme in which the credential is sought. The student is also required to meet the English language international benchmark standards for that program, where applicable, to achieve a minimum cumulative GPA of 2.0 for a Bachelor's degree or a minimum cumulative GPA of 3.0 for a Master's degree, and, where applicable, provide proof of UAE nationality status as outlined in the procedure. Appeals to the GPA graduation requirement will not be accepted.
- **Residency Requirement:** A minimum of 50% of the programme credit requirements must be completed at the Higher Colleges of Technology. Courses taken while enrolled in another programme at HCT, but which did not lead to the award of a credential, will be accepted as contributing to the residency requirement.
- A student will graduate from the HCT College at which the programme is completed.
- Graduates are eligible to participate in an official Graduation Ceremony. Eligible graduates will be invited to the ceremony.
- Once the graduation award is made, no change in the credential title or name of the awardee is permitted. A graduate may apply for one replacement of lost or damaged credential documentation for a prescribed fee.
- Graduates are eligible for awards, scholarships and memberships.
- Grade changes made after the end of the graduation eligibility period, resulting from supplemental and alternative assessments being conducted outside the timeframe specified in the Academic Calendar, may delay the student's graduation to the following academic year.

4.0 Stakeholder Impact and Scope

College Directors, as Student Records Custodians, need to be aware of their responsibilities to ensure processes are in place to identify all potential graduates.

Academic and Student Services in HCT Colleges need to put in place processes and procedures to inform students in the final year of their studies to apply for graduation.

Programme Chairs need to be proactive in providing advice to students in the final year regarding any program non-compliance issues.

Student Support Services

LP201 Academic Honesty

1.0 Rationale

The Higher Colleges of Technology (HCT) is committed to creating a learning environment that is honest and ethical. This policy is made with the awareness that students come from a variety of academic backgrounds where understanding of academic honesty and ethical principles varies. It is also understood that the HCT operates in a global environment where principles of academic honesty are challenged by technology and the availability of easy opportunities for dishonest practices.

2.0 Terminology

Academic Honesty: An expectation that students will conduct their academic activities fairly and honestly with particular emphasis on avoiding cheating and plagiarism.

Cheating: A deliberate attempt to gain marks or academic credit dishonestly, or helping someone else to gain marks or academic credit dishonestly.

Plagiarism: Deliberately presenting another person's work as one's own without acknowledging the original source.

3.0 Policy

Students are required to refrain from all forms of academic dishonesty as defined and explained in HCT procedures and directions from HCT personnel.

HCT College Personnel - Faculty, Academic Supervisors, Heads and Directors - are responsible for ensuring that students understand their responsibilities associated with academic honesty and the disciplinary measures, which will be imposed for failing to meet these responsibilities. They are also responsible for carrying out the appropriate investigative and disciplinary procedures.

A student found guilty of having committed acts of academic dishonesty may be subject to one or more of the disciplinary measures as outlined in Article 33 of the Student and Academic Regulations.

4.0 Stakeholder Impact and Scope

This policy applies to all students enrolled in programs at the HCT.

Faculty, Program Chairs, Executive Deans and College Directors are responsible for explaining this policy to all students and to ensure that students understand the HCT definition for academic dishonesty, are aware of the types of behaviour that will be considered as a breach of conduct, understand their responsibilities related to academic honesty, are aware of the disciplinary measures that could be imposed in cases of breach of conduct and the consequence of a permanent record on the student transcript.

LP216 Misconduct, Non-Academic

1.0 Rationale

In the interests of promoting welfare and safety of students and staff and the good reputation of the organisation, the Higher Colleges of Technology has established standards of conduct that aim to deal with allegations of student misconduct.

2.0 Terminology

Disciplinary Dismissal: Termination from the HCT for non-academic reasons

Suspension: A required temporary absence from the HCT

3.0 Policy

- While on, approaching, or leaving HCT campuses or HCT sponsored or supervised events, students are subject to disciplinary action for misconduct in relation to person, property, orderly processes of the HCT, or other types of misconduct as may be prescribed in HCT regulations, policies or procedures.
- An allegation of non-academic misconduct may be brought against any student by HCT staff, student, or an external person with an association with the HCT.
- HCT College Directors are required to adhere to the procedures associated with this policy in dealing with allegations of Non-Academic Misconduct.
- The following disciplinary sanctions, listed in order of severity, may be applied to misconduct in relation to the person, misconduct in relation to property, and misconduct in relation to the orderly processes of the HCT with the authority of the HCT College Director. Where appropriate, more than one sanction may be imposed.
- **Warning:** Written warning that continuation or repetition

of conduct found wrongful, within a period of time stated in the warning, may be cause for more severe disciplinary action.

- **Restitution:** Monetary reimbursement for damage to or misappropriation of property. This may take the form of appropriate service or other monetary compensation.
- **Interim Suspension:** A student may be immediately excluded from classes and other HCT activities when the student's continued presence on the campus constitutes a danger, or threat of danger, to property, the student, or others.
- **Disciplinary Probation:** Disciplinary probation shall have as its purpose the rehabilitation of the student and may include suspension of specified privileges for a definite period not to exceed the remaining duration of the semester in which the misconduct is committed plus one additional semester. The student may be required to attend counselling sessions.
- **Disciplinary Suspension:** Exclusion from classes and other HCT privileges and activities as set out in the order after a hearing, for a definite period not to exceed the remaining duration of the semester in which the misconduct is committed plus one additional semester. The conditions of re-enrolment shall be stated in the order of the suspension.
- **Disciplinary Dismissal:** Termination of student status.
- **Cancellation of Credential Awarded**
 - A student alleged to have committed misconduct in relation to person, property, and/or the orderly processes of the HCT is entitled to a hearing according to HCT procedures.
 - Disciplinary sanctions for misconduct in relation to orderly processes of the HCT apply to enrolled students and may extend to HCT graduates and former students.
 - No complaint may be filed against a student if more than six months has elapsed since the occurrence of the alleged misconduct in relation the person or property, with the exception of misconduct in relation to the orderly process of the HCT which shall have no limitation.
 - Students or applicants who gain admission to the HCT through false information may have their student status cancelled by the System Registrar in consultation with the HCT College Director.

4.0 Stakeholder Impact and Scope

This policy applies to all students of the HCT, and to conduct occurring on any HCT campus, or facilities owned or occupied by the HCT, and at any events or activities conducted under the name and auspices of the HCT, such as field trips,

excursions, and educational or work placements with outside organisations.

College Directors, Deans, and Program Chairs, College Academic and Student Services staff are responsible for explaining this policy to all students and ensure students understand the HCT definition for non-academic misconduct, the types of behaviour that will be considered as a breach, and ensure students understand their responsibilities, the disciplinary measures, and the consequences.

LP218 Student Rights and Responsibilities

1.0 Rationale

This outlines the basic standards expected of students at the HCT and the basic rights that students, potential students and former students are entitled to, from the Higher Colleges of Technology. In administering rights and responsibilities, the Higher Colleges of Technology Management has the well-being of students and the promotion of their education at the forefront.

2.0 Terminology

3.0 Policy

1. All HCT students, whilst enrolled, have the following rights:
 - a. To appropriate opportunities for learning to pursue the educational goals of their courses.
 - b. To have opportunities to discuss and express any views which are relevant to the subject matter of courses and which are not contrary to the religious, political, cultural and moral values of the UAE.
 - c. To the reasonable use of campus facilities.
 - d. To join appropriate campus organisations and engage in recreational activities, subject to reasonable conditions which may be imposed to regulate the timeliness of requests, the appropriateness of the space assigned and time of use, and to ensure proper maintenance of the facilities.
 - e. To privacy and not to have their photographic image taken or published without consent, other than in official HCT publications.
2. All HCT students, potential students, and former students, have the following rights:
 - a. To freedom from discrimination based on disability.
 - b. To security for their persons on the HCT campuses.
 - c. To confidentiality with regards to their views, beliefs,

and political associations expressed in the course of instruction, advising, or counselling, unless disclosure is authorised by written consent.

- d. To exemption from disciplinary action that affects their status as students except for academic discipline, and discipline under rules and regulations that shall be fully and clearly disclosed in advance of alleged violations.
 - e. To clear notice of the nature and cause of any disciplinary charges, and the right to an impartial hearing.
3. All HCT students have the following responsibilities:
 - a. To direct their efforts toward learning the content of all courses in which they are enrolled.
 - b. To participate fully in classroom learning activities.
 - c. To engage with their best efforts in all assignments and assessment activities and to submit these as prescribed by the instructor or other staff of the HCT.
 - d. To participate fully in educational activities outside the classroom, such as field trips, that form part of a course in which the student is enrolled.
 - e. To contribute to the best of their abilities to creating an environment that is conducive to the educational objectives of the HCT.
 - f. To uphold the good name of the Higher Colleges of Technology as an organisation and as a community and the reputation of all its staff and students, in any communications within or outside the HCT.
 4. Any of the disciplinary sanctions as published in the Academic and Student Regulations may be imposed on the student for breach of student responsibilities.

4.0 Stakeholder Impact and Scope

This policy applies to all students enrolled in programmes, and where explicitly stated, to potential and former students.

Programme Chairs and Associate Deans at HCT colleges are responsible for explaining this policy to all students and for ensuring students understand their rights and responsibilities, the types of behaviour that will be considered a breach, and the consequence.

LP235 Student Complaints Policy

1.0 Rationale

The Higher Colleges of Technology (HCT) is committed to ensuring that all students have a positive educational experience whilst enrolled at HCT, and that the workplace culture embraces accountability and opportunities for continual improvement. The student complaints policy and procedures are established to handle student complaints effectively and efficiently to ensure students' positive experience and staff accountability are maintained.

2.0 Terminology

Student Complaint: An expression of dissatisfaction made by an enrolled student to the Higher Colleges of Technology. The dissatisfaction may concern academic or non-academic matters relating to HCT staff, programmes, policies, rule, regulations, processes, or the complaints-handling process itself, where the student expects a resolution.

Complaints Management: A structured process for receiving, recording, investigating and responding to complaints.

3.0 Policy

- 3.1 The Dean of Student Services will allocate appropriate levels of resources to establish a complaints management process that ensures student complaints are addressed in an equitable, objective and unbiased manner, and that the complainant receives an appropriate response in a timely manner.
- 3.2 Detailed procedures for managing student complaints must be established at HCT colleges, in accordance with the HCT principles and guidelines for student complaints management, and published. The procedures must include:
 - 3.2.1 The mechanisms by which student complaints are to be recorded and filed;
 - 3.2.2 The timescales for investigating the complaint and responding to the student;
 - 3.2.3 The name of the staff who need to be notified, internally and externally, about different types of complaints;
 - 3.2.4 The name of the person at the college responsible for handling complaints of academic nature, and non-academic nature;
 - 3.2.5 The circumstances in which complaints should be escalated within the college;

- 3.3.6 The circumstances in which no action will be taken on complaints or communication with a complainant will cease;
 - 3.3.7 Guidelines on appropriate remedies for staff handling student complaints.
- 3.3 A document, print or electronic, detailing the complaints process, and containing information on how to make a complaint and how the complaint will be resolved must be available to all students, staff, and interested parties at Student Services on request, in English and Arabic.
- 3.4 The Dean of Student Services will establish who is accountable within the college for responding to complaints, deciding on action, and reporting on these actions and decisions.
- 3.5 Information relating to student complaints form part of the official student record and must be kept in the official student record system as administrative records and be kept confidential.

4.0 Stakeholder Impact and Scope

This policy and related procedures apply to enrolled, deferred, dismissed, suspended, withdrawn, former students and graduates. Conflicts between students are dealt with under the HCT Code of Student Conduct and the Non-Academic Misconduct policy.

It is recognised that local conditions differ at individual colleges, however, this policy obliges all colleges to manage student complaints in a manner that gives optimal results for both the student and the college.

Awards

Graduation Awards

Students graduate with Distinction, Distinction with Honours or Distinction with Highest Honours, provided they meet the following criteria in their programme or major, maintained at the individual campuses:

- Distinction: a Cumulative GPA between 3.50 and 3.74;
- Distinction with Honours: a Cumulative GPA between 3.75 and 4.00;
- Distinction with Highest Honours: highest Cumulative GPA system-wide, provided the Cumulative GPA is between 3.75 and 4.00.

The achievement of 'Distinction', 'Distinction with Honours' and 'Distinction with Highest Honours' will be noted on the student's credential and transcript. If more than one student achieves the highest GPA in an individual programme major, then the appropriate number of awards will be made.

The Executive Dean's List

Students who achieve a Grade Point Average of 3.50 or above shall be placed on the Executive Dean's List for their Division.

Students in good standing on programmes who achieve a Grade Point Average of 3.50 or above in any semester while taking at least 15 credit units of classes are placed on the Executive Dean's List.

Records of the Executive Dean's List are published and maintained on each campus.

Abu Dhabi Industry Awards

The Abu Dhabi Industry Awards are awarded to top HCT graduates. Nominees for this award are in the top 10% of the graduating class in each of the following aspects:

- graduation GPA (grade point average);
- grades in graduation project and work placement;
- attendance record in the final year of their programme; and
- contributions to campus activities and community.

Company Awards

Graduates may also be eligible for a variety of other awards sponsored by specific companies. For details of these, students should contact their programme Dean.

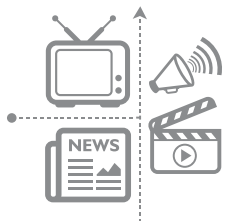


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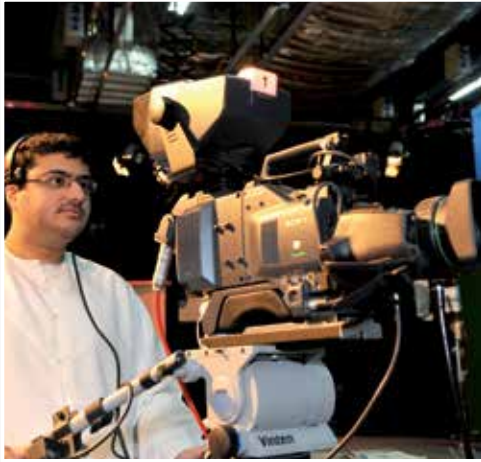
PROGRAMMES





APPLIED COMMUNICATIONS DIVISION





Applied Communications Division

Divisional Mission

The Applied Communications Division produces graduates with a strong foundation in the theoretical and practical aspects of numerous media fields, including television & radio broadcasting, journalism, design & graphics, multimedia, corporate communications, event management, photography and many others.

Applied Communications graduates will be capable of applying critical and creative approaches to the application of conceptual, production and technical skills in order to achieve the highest professional standards in a rapidly evolving media industry. Furthermore, graduates will develop the skills required to be self-learners through being exposed to a range of learning opportunities.

This Division provides a student-centered and project-based blended learning environment where practical project work is contextualized and supported by theoretical knowledge. Learning is accomplished through a variety of means including, but not limited to, lectures, student research, discussions, workshops, guest speakers and industry visits.

Upon graduating from the Division, students will have achieved transferable knowledge and skills appropriate to industry standards. They will also have communication skills which will allow them to operate in a broad range of professional environments.

Senior Staff

Dr. Hamad Odhabi, Executive Dean of Computer Information Science and Applied Communications

Degree	Offered at
Bachelor of Applied Media (Corporate Communications)	Abu Dhabi Men's; Dubai Women's
Bachelor of Applied Media (Video Production)	Abu Dhabi Men's; Abu Dhabi Women's; Dubai Men's; Ras Al Khaimah Men's; Ras Al Khaimah Women's; Sharjah Women's
Bachelor of Applied Media (Graphic Design)	Abu Dhabi Women's; Dubai Women's; Fujairah Women's; Sharjah Women's

Bachelor of Applied Media

Admission to program

In addition to general HCT admission requirements as stated in the HCT Admission Policy described in the Academic Policies section of this Catalogue, this program requires students to complete Foundations Math Level 1 or equivalent as minimum entry requirements for the program.

Program Mission

The mission of the Bachelor of Applied Media is to provide students with the skills, knowledge and competencies required to meet the challenges of the nationally developing discipline of Applied Media and the rapidly changing discipline of media communication. Graduates will have successful careers in Applied Media fields or will be able to pursue advanced degrees successfully. Graduates of this program should be able to communicate effectively, work collaboratively and exhibit high levels of professionalism, ethical responsibility, and engage in life-long learning and professional development to adapt to the rapidly changing work environment.

Program Description

Delivered in a technology rich environment and collaboration with the industry, the Applied Communications Program trains students in the areas of Corporate Communications, Video Production, and Graphic Design. Learning takes place in well-equipped studios and labs using state-of-the-art equipment. The transition from college into employment is further enhanced through a well-structured work based learning study programme. Graduates are capable of applying creative and critical thinking skills to achieve the highest professional standards in rapidly evolving media, design and communications industries in the region and beyond. The program should prepare students to work in media production, public relations, corporate communication, and visual design.

The program has been designed with the first three common years leading to a Higher Diploma in Applied Media. In the fourth year of the program, the student is required to select one of the following concentrations:

- **Corporate Communications**
- **Video Production**
- **Graphic Design**

Students have the option to exit the program with a Higher Diploma in Applied Media after completion of the third year.

Program Goals

- Graduates will have successful careers in Applied Media fields or will be able to successfully pursue advanced degrees.
- Graduates will provide solutions to challenging problems in their profession by applying Applied Media Theories and Skills.
- Graduates will communicate effectively, work collaboratively and exhibit high levels of professionalism and ethical responsibility.
- Graduates will engage in life-long learning and professional development to adapt to the rapidly changing work environment.

Programme Learning Outcomes

Common for Bachelor of Applied Media and Higher Diploma Exit Option

- Develop competency in core applied media skills, including proficiency in a range of relevant media and communication tools, technology and practices.
- Develop skills that can be used to describe, analyze, and evaluate theoretical and practical issues in a range of applied media contexts.
- Demonstrate professional behavior including the ability to communicate and lead in ways that are professional, ethical and socially responsible.
- Demonstrate professional attitudes including commitment to lifelong independent learning, respect for diversity and informed appreciation of contemporary, societal and global issues.

In addition, each final year concentration has its specific program learning outcomes.

Corporate Communications Concentration

- Using visual, technical and critical skills, communicate ideas clearly and professionally about the industry and practice of the Corporate Communications Concentration.
- Produce creative work demonstrating technical, aesthetic, and conceptual understanding of the industry and practice of the Corporate Communications Concentration.
- Learn the professional skills and behaviors necessary to compete in the global marketplace for the Corporate Communications Concentration.

Video Production Concentration

- Using visual, technical and critical skills, communicate ideas clearly and professionally about the industry and practice of the Video Production Concentration.
- Produce creative work demonstrating technical, aesthetic,

and conceptual understanding of the industry and practice of the Video Production Concentration.

- Learn the professional skills and behaviors necessary to compete in the global marketplace for the Video Production Concentration.

Graphic Design Concentration

- Using visual, technical and critical skills, communicate ideas clearly and professionally about the industry and practice of the Graphic Design Concentration.
- Produce creative work demonstrating technical, aesthetic, and conceptual understanding of the industry and practice of the Graphic Design Concentration.
- Learn the professional skills and behaviors necessary to compete in the global marketplace for the Graphic Design Concentration.

Completion Requirements

Students must successfully complete a minimum of 132 credits, including:

- Applied Media core courses: 72 credits
- Applied Media 4000 elective courses: 6 credits
- Concentration Courses: 21 credits
- General Studies: 33 credits

Applied Media Core Courses		
Required Credits: 72		
CDG 2303	Introduction to Graphic Design	3
CDG 3003	Graphics Studio	3
CDG 3503	Typography I	3
CMC 2303	Corporate Communication I	3
CMC 3003	Digital Marketing	3
CMC 3503	Social Media	3
CMV 2003	Motion Graphics	3
CMV 3503	Editing	3
CMV 3513	Production Skills I	3
COM 1003	Digital Storytelling	3
COM 1123	Introduction to Media Technology	3
COM 1143	Visual Communications	3
COM 1153	Media Literacy	3
COM 1203	Photography	3
COM 1223	History of Media and Design	3
COM 2003	Convergent Journalism	3
COM 2103	Creative Writing	3
COM 2313	Project Management for Media	3
COM 3003	Viral Video for Social Media	3
COM 3013	Interviewing and Presenting	3
COM 3606	Work Placement I	6
COM 3616	Work Placement II	6

Corporate Communication Concentration Courses		
Concentration Code: CMCC		
Required Credits: 21		
CMC 4023	Media Relations	3
CMC 4033	Corporate Communication II	3
CMC 4623	Communication Theory	3
CMC 4713	Media Law and Ethics	3
CMC 4803	Internal Communication Management	3
CMC 4806	Final Project - Corporate and Media Communications	6

Graphic Design Concentration Courses		
Concentration Code: CDGC		
Required Credits: 21		
CDG 4023	Design Illustration	3
CDG 4033	Studio Graphics	3
CDG 4503	Advanced Typography	3
CDG 4713	Packaging Design	3
CDG 4723	Sustainable/Social Design	3
CDG 4806	Final Project - Graphic Design	6

Video Production Concentration Courses		
Concentration Code: CMVC		
Required Credits: 21		
CMV 4103	Production Skills II	3
CMV 4203	Video Scriptwriting	3
CMV 4613	Short Video Production	3
CMV 4713	Documentary	3
CMV 4803	Advanced Edit and Effects	3
CMV 4806	Final Project - Video Production	6

4000 Elective Courses		
Required Credits: 6		
CDG 4003	New Trends in Graphic Design	3
CDG 4013	Graphic Design Thinking for Innovation	3
CMC 4003	New Trends in Corporate Communication	3
CMC 4013	Effective Corporate Communications in a Globalised Workplace	3
CMV 4003	Film and Video Distribution and Marketing	3
CMV 4013	Screen Culture	3

General Studies		
Required Credits: 33		
English, Arabic or other Languages		15
Humanities or Art		3
Information Technology or Mathematics		3
The Natural Sciences		3
The Social or Behavioural Sciences		9

Higher Diploma in Applied Media Exit Option

Completion Requirement

Students must successfully complete a minimum of 102 credits, including:

- Applied Media Core Courses: 72 credits including both internships
- General Studies: 30 credits

Recommended Sequence of Study

Bachelor in Applied Media

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
LSS 1003	Life and Study Skills	3	COM 1003	Digital Storytelling	3
LSC 1103	Academic Reading & Writing I	3	COM 1223	History of Media and Design	3
COM 1143	Visual Communications	3	LSM 1123	Quantitative Reasoning	3
COM 1153	Media Literacy	3	AES 1013	Arabic Communications I	3
COM 1123	Intro to Media Technology	3	LSC 2103	Academic Reading & Writing II	3
Year 1 Summer Semester*			Year 2 Semester 3		
Required Credits:			Required Credits: 15		
			LSC 1503	Academic Spoken Communication	3
			AES 1003	Emirati Studies	3
			COM 1203	Photography	3
			COM 2103	Creative Writing	3
			COM 2003	Convergent Journalism	3
Year 2 Summer Semester*			Year 2 Semester 4		
Required Credits: 6			Required Credits: 15		
COM 3606	Work-Placement1 (8 weeks)	6	CMV 2003	Motion Graphics	3
			LSN 1113	Introduction to Sustainability	3
			LSS 1123	Methods of Research	3
			CDG 2303	Introduction to Graphic Design	3
			CMC 2303	Corporate Communication I	3
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 15			Required Credits: 15		
CMV 3513	Production Skills I	3	CMV 3003	Viral Video for Social Media	3
CMV 3503	Editing	3	LSS 2403	Innovation & Entrepreneurship	3
CDG 3003	Graphics Studio	3	CMC 3503	Social Media	3
CDG 3503	Typography	3	COM 2313	Project Management for Media	3
CMC 3003	Digital Marketing	3	COM 3013	Interviewing and Presenting	3
Year 3 Summer Semester*					
Required Credits: 6					
COM 3616	Work-Placement 2 (8 weeks)	6			

Higher Diploma in Applied Media Exit Option

* Additional courses may be offered in each Summer Semester at the discretion of the Academic Division.

Corporate Communications Concentration

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
	Elective	3		Elective	3
CMC 4033	Corporate Communications II	3	CMC 4806	Final Project-Corp. Comm.	6
CMC 4623	Communication Theory	3	CMC 4023	Media Relations	3
CMC 4713	Media Law and Ethics	3	CMC 4803	Internal Communication Management	3
	General Studies	3			

Graphics Design Concentration

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
CDG 4503	Advanced Typography	3	CDG 4806	Final Project- Graphics Design	6
CDG 4023	Design Illustration	3	CDG4723	Sustainable Social Design	3
CDG 4033	Studio Graphics	3		Elective	3
CDG 4713	Packaging Design	3		Elective	3
	General Studies	3			

Video Production Concentration

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
CMV 4613	Short Video Production	3	CMV 4806	Final Project- Video Production	6
CMV 4713	Documentary	3	CMV 4803	Advanced Edit and Effects	3
CMV 4103	Production Skills II	3		Elective	3
CMV 4203	Video Scriptwriting	3		Elective	3
	General Studies	3			

Academic Staff:

Adele Myers, Master of Arts Fine Art, Manchester Metropolitan University

Ahlam Mohammad Ali Al Bannai Al Blooshi, Bachelor of Applied Science Applied Media Studies, Dubai Women's College

Anirban Das, Master of Arts Film, Television & Screen Media, Birkbeck College

Awwad Abu Zaineh, PhD Arabic Language & Literature, University Mohamed V, Morocco

Bilal Ahmad, Masters Multimedia Arts, National College of Arts, Lahore

Brenda Webster, PhD Journalism, University of Missouri

Cleo Cacoulidis, Master of Fine Arts Creative Writing, New School University

David Moore, Masters Film & Television, Victorian College of the Arts School of Film and Television (VCA)

Dmitri Psiropoulos, Master of Arts English as a Second or Foreign Language, University of Technology, Sydney, Australia

Edward Ryan, Master of Arts Visual Communication, National College Arts & Design

Elizabeth Daggett, Master of Fine Arts Radio, Television and Film, University of North Texas

Felicity Chadwick, Masters Cross-Disciplinary Art & Design, University of New South Wales

Ghinwa Hachache, Master of Arts Communication Arts, Cinema/Television, Regent University

Hanan Hasan Ahmed Mohamed Al Hosani, Bachelor of Education Teach English for Young Learners, Ras Al Khaimah Women's College

Hessah Al Falahi, Master of Arts Communications, Zayed University

Ilze Loza, Master of Arts Humanities, Art Academy of Latvia

Iqbal Akthar, PhD Cultural & Media Studies, University of Sussex

Ivana Ercegovac, Masters Journalism, Megatrend University

Julian Stone, Master of Philosophy Communication Design, Manchester Metropolitan University

Kendal Newman, PhD Computing Via Internet, Griffith University

Leo Wong, Master of Fine Arts Production, American Film Institute

Lim Meng, Master of Business Administration Luxury Brand Management, International Fashion Academy

Mariam Atieh, Master of Arts Fine Art, University Balamand – Academy Lebanese des Beaux – Arts (ALBA) Beirut

Mark Mattheis, Master of Arts Mass Communications and Media Arts, Southern Illinois University

Mohamad Nor, Master of Fine Arts Imaging Arts, Rochester Institute of Technology

Mona Gabr, Masters Mass Communication, Ain Shams University

Mutaz Matar, Master of Fine Arts Cinematic Arts, Red Sea Inst of Cinematic Arts

Nada Alshammari, Master of Arts Media Arts, Philosophy and Practice, University of Greenwich

Nathan Brines, Masters Photography, East Carolina University School of Art and Design

Nada Obaid Altaher, Masters Graphic Design, Monash University

Outi Katriina Katajamaki, Masters Organizational Communication, University of Jyväskylä

Quan Tuan Trinh, Masters Digital Media, The University of Newcastle

Rajaa Abu Jaber, Master of Arts Public Affair, Indiana University

Rizwan Wadood, Master of Arts Mass Communication, Jamia Millia Islamia

Salwa Nabhan, Master of Education Online Education, University of Southern Queensland

Sarah Weber, Master of Fine Arts Design, Virginia Commonwealth University

Shahin Yazdani, Bachelor of Fine Arts Fine Art, University of Canterbury

Susan De Guzman, Master of Education Open and Distance Learning, University of Southern Queensland

Syed Almashoor, Masters Animation & Interactive Media, University of West of England

Tarang Taswir, Master of Arts Mass Communication, A.J.K Mass Communication Research Center-Jamia Millia Islamia

Timothy Wilkerson, Master of Fine Arts Film, Video, and New Media Theory and Production, University of Texas

Tina Gates, PhD Instructional & Curriculum Leadership, Northcentral University

Waleed Al Shehhi, Executive MBA Innovation & Entrepreneurship, Higher Colleges of Technology

Wanda Velazquez, PhD Mass Communication, Pennsylvania State University

Yohance Douglas, Master of Fine Arts Motion Graphics, Savannah College of Art & Design

Yulius Yulius, Master of Computer Graphic Design Interactive Media, Wanganui School of Design

Zakaia Cvitanovich, Master of Arts Communication Studies, University of New England



BUSINESS DIVISION





Business Division

Divisional Mission

The Business Division has a mission of being committed to developing and delivering quality, student-centered Business education that provides students with the knowledge and skills to meet the evolving needs of stakeholders in the UAE. The Division serves the needs of the region by offering sustainable programs that provide both local and global perspectives, promote social responsibility and enhance critical thinking and professional practices.

The Division provides superior graduates capable of assuming challenging and key positions, integrating the business expertise and skills needed in a rapidly evolving society. These programs enable graduates to meet professional requirements found in a bilingual multicultural business environment and develop employability and lifelong learning skills leading to a variety of management careers in local and international organizations within the UAE. Business graduates find their skills are highly sought after by many UAE organizations.

Graduates can expect to work in a wide range of industries and organizations with the public and private sector including banks, accountancy firms, property companies, the aviation industry, oil and gas companies, the government, information technology firms, etc. or opt to become entrepreneurs.

Senior Staff

Executive Dean: **Dr. Ayesha Abdullah**

List of degrees offered

Bachelor of Accounting

Bachelor of Business Analytics

Bachelor of Finance

Bachelor of Human Resource Management

Bachelor of Innovation and Entrepreneurship Management

Bachelor of Logistics and Supply Chain Management

Bachelor of Marketing

Bachelor of Quality Management

Bachelor of Tourism Management

The Business Programs shown above are offered at the HCT Campuses based on student enrollment.

Bachelor of Accounting

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Bachelor of Accounting program seeks to produce graduates able to function effectively in managerial and practitioner roles in the specialized field of Accounting. Graduates will have the skills, values and ability to explain, analyze and evaluate complex Accounting processes in local and global contexts, while demonstrating the ability to work independently, or in teams, to think critically, solve problems, make recommendations for improvements, and use advanced accounting tools.

Program Description

The Bachelor of Accounting program provides students with the accounting knowledge and skills needed to work as competent accounting professionals. Successful completion of the program will enable graduates to work in a variety of public and private sector organizations. The program imparts sought-after accounting expertise, and instils confidence, through its emphasis on both theoretical and applied state-of-the-art accounting training.

The program offers two distinct concentrations –

Financial Accounting and Managerial Accounting:

For the **Financial Accounting concentration**, students take – ACC 4043, 4053, 4153, 4163 & 4173 elective courses

For the **Managerial Accounting concentration**, students take – ACC 4023, 4033, 4123, 4133 & 4143 elective courses

Students will have the option to graduate with a Higher Diploma in Accounting upon the successful completion of 102 credits inclusive of the two internship courses.

Program Goals

To develop graduates who possess the

- Current knowledge and understanding of key areas of the Accounting field, their interrelationship and application.
- Ability to use the Accounting tools, think critically, and conduct applied research.
- Necessary key success skills in business
- In depth knowledge of the Accounting field and its interrelationship and application across business environments.

Program Learning Outcomes

Degree Level:

Students will be able to...

1. Demonstrate in-depth knowledge of accounting areas and tools.
2. Use appropriate tools to solve complex authentic problems in accounting contexts.
3. Conduct research and critically evaluate arguments, abstract concepts and data, to examine issues in accounting.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local accounting contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.
7. Demonstrate the ability to apply Accounting principles to various real world situations.

Higher Diploma Exit:

Students will be able to...

1. Demonstrate knowledge of Accounting principles, concepts and tools.
2. Use appropriate tools to solve problems in accounting contexts.
3. Conduct research and examine arguments, concepts and data, to assess issues in accounting.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Accounting contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.

Completion Requirements

		Course Credits
Business Core Courses		
Required Credits: 54		
ECO 1003	Microeconomics	3
MGT 1003	Principles of Management	3
ACC 1003	Financial Accounting	3
MRK 1103	Principles of Marketing	3
ECO 1103	Macroeconomics	3
ACC 1103	Managerial Accounting	3
STS 2003	Business Statistics	3
FIN 2003	Financial Management	3
OPM 2103	Operations Management	3
MGT 2103	Organizational Behaviour	3
BIS 3003	Business Information Systems	3
MGT 3003	Business Ethics and Corporate Governance	3
MGT 3103	Strategic Management and Simulation	3
LAW 3103	Business and Commercial Law	3
INT 2156	Business Internship 1	6
INT 3156	Business Internship 2	6

		Course Credits
Accounting Core Courses		
Required Credits: 30		
ACC 2003	Cost Accounting	3
ACC 2103	Intermediate Financial Accounting I	3
ACC 3003	Intermediate Financial Accounting II	3
ACC 3013	Taxation	3
ACC 3113	Auditing	3
FIN 3003	Corporate Finance	3
ACC 4003	Accounting Information Systems	3
ACC 4013	International Financial Reporting Standards	3
ACC 4113	Investment Analysis	3
ACC 4203	Accounting Research Project	3

		Course Credits
Financial Accounting Concentration		
Required Credits: 15		
ACC 4043	Advanced Auditing	3
ACC 4053	Advanced Financial Accounting	3
ACC 4153	Financial Reporting	3
ACC 4163	Government and Non- Profit Accounting	3
ACC 4173	Contemporary Issues in Accounting	3

		Course Credits
Managerial Accounting Concentration		
Required Credits: 15		
ACC 4023	Advanced Management Accounting	3
ACC 4033	Accounting for Decision Making and Control	3
ACC 4123	Cost Management	3
ACC 4133	Accounting Systems Performance Management	3
ACC 4143	Management Control Issues	3

		Course Credits
Accounting Elective Courses (For Students not pursuing a Concentration)		
Required Credits: 15		
ACC 4023	Advanced Management Accounting	3
ACC 4033	Accounting for Decision Making and Control	3
ACC 4043	Advanced Auditing	3
ACC 4053	Advanced Financial Accounting	3
ACC 4123	Cost Management	3
ACC 4133	Accounting Systems Performance Management	3
ACC 4143	Management Control Issues	3
ACC 4153	Financial Reporting	3
ACC 4163	Government and Non- Profit Accounting	3
ACC 4173	Contemporary Issues in Accounting	3

		Course Credits
General Studies		
Required Credits: 33		
English, Arabic or other Languages		15
Humanities or Art		3
Information Technology or Mathematics		3
The Natural Sciences		3
The Social or Behavioural Sciences		9

<i>Total Required Credits</i>	132
<i>Maximum Duration of Study</i>	6
<i>Cost Recovery Program</i>	No
<i>Minimum Duration of Study</i>	4
<i>Program Code</i>	BUACC
<i>Major Code</i>	ACC

Recommended Sequence of Study

Bachelor of Accounting

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
ACC 1003	Financial Accounting	3	ACC 1103	Managerial Accounting	3
ECO 1003	Microeconomics	3	ECO 1103	Macroeconomics	3
MGT 1003	Principles of Management	3	MRK 1103	Principles of Marketing	3
LSM 1003	Applied Mathematics (GS)	3	LSS 1123	Methods of Research (GS)	3
LSS 1003	Life and Study Skills (GS)	3	LSC 1103	Academic Reading and Writing I (GS)	3
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 15			Required Credits: 15		
ACC 2003	Cost Accounting	3	ACC 2103	Intermediate Financial Accounting I	3
FIN 2003	Financial Management	3	MGT 2103	Organizational Behavior	3
STS 2003	Business Statistics	3	OPM 2103	Operations Management	3
AES 1013	Arabic Communication 1 (GS)	3	AES 1003	Emirati Studies (GS)	3
LSC 2103	Academic Reading and Writing II (GS)	3	LSC 1503	Academic Spoken Communication (GS)	3
Year 2 Summer Semester			Year 3 Semester 6		
Required Credits: 6			Required Credits: 15		
INT 2156	Business Internship 1	6	ACC 3113	Auditing	3
Year 3 Semester 5			FIN 3003	Corporate Finance	3
Required Credits: 15			LAW 3103	Business and Commercial Law	3
ACC 3003	Intermediate Financial Accounting II	3	MGT 3103	Strategic Management and Simulation	3
ACC 3013	Taxation	3	LSS 2403	Innovation and Entrepreneurship (GS)	3
BIS 3003	Business Information Systems	3	Year 3 Summer Semester		
MGT 3003	Business Ethics and Corporate Governance	3	Required Credits: 6		
LSN 1113	Intro to Sustainability (GS)	3	INT 3156	Business Internship 2	6
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
ACC 4003	Accounting Information Systems	3	ACC 4113	Investment Analysis	3
ACC 4013	International Financial Reporting Standards	3	ACC 4203	Accounting Research Project	3
	Elective	3		Elective	3
	Elective	3		Elective	3
AES 3003	Professional Arabic (GS)	3		Elective	3

Higher Diploma in Accounting Exit

Bachelor of Business Analytics

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Bachelor of Business Analytics program seeks to produce graduates able to function effectively in managerial and practitioner roles in the specialized field of Business Analytics. Graduates will have the skills, values and ability to explain, analyze and evaluate complex Business Analytics processes in local and global contexts, while demonstrating the ability to work independently, or in teams, to think critically, solve problems, make recommendations for improvements, and use advanced Business Analytics tools.

Program Description

The Bachelor of Business Analytics program provides students with the knowledge and skills needed to work as data engineers, business intelligence professionals and business analysts. Successful completion of the program will enable graduates to work in a variety of public and private sector organizations. The program teaches formal methods for structured analytics work, whilst providing exposure to state-of-the-art business analytics tools.

In addition to the core business analytics qualification, the program offers a concentration in Information Management.

For the **Information Management concentration**, students take – BNA 4023, BNA 4033, BNA 4113, BNA 4123 and CIB 4133 elective courses

Students will have the option to graduate with a Higher Diploma in Business Analytics upon the successful completion of 102 credits inclusive of the two internship courses.

Program Goals

To develop graduates who possess the

- Current knowledge and understanding of key areas of the Business Analytics field, their interrelationship and application.
- Ability to use the Business Analytics tools, think critically, and conduct applied research.
- Necessary key success skills in business.
- In depth knowledge of the Business Analytics field and its interrelationship and application across business environments.

Program Learning Outcomes

Degree Level

Students will be able to...

1. Demonstrate in-depth knowledge of Business Analytics areas and tools.
2. Use appropriate tools to solve complex authentic problems in Business Analytics contexts.
3. Conduct research and critically evaluate arguments, abstract concepts and data, to examine issues in Business Analytics.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Business Analytics contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.
7. Demonstrate the ability to apply Business Analytics principles to various real world situations.

Higher Diploma Exit

Students will be able to...

1. Demonstrate knowledge of Business Analytics principles, concepts and tools.
2. Use appropriate tools to solve problems in Business Analytics contexts.
3. Conduct research and examine arguments, concepts and data, to assess issues in Business Analytics.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Business Analytics contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.

Completion Requirements

Business Core Courses		
Required Credits: 54		
ECO 1003	Microeconomics	3
MGT 1003	Principles of Management	3
ACC 1003	Financial Accounting	3
MRK 1103	Principles of Marketing	3
ECO 1103	Macroeconomics	3
ACC 1103	Managerial Accounting	3
STS 2003	Business Statistics	3
FIN 2003	Financial Management	3
OPM 2103	Operations Management	3
MGT 2103	Organizational Behaviour	3
BIS 3003	Business Information Systems	3
MGT 3003	Business Ethics and Corporate Governance	3
MGT 3103	Strategic Management and Simulation	3
LAW 3103	Business and Commercial Law	3
INT 2156	Business Internship 1	6
INT 3156	Business Internship 2	6

Business Analytics Core Courses		
Required Credits: 30		
BNA 2103	Business Applications Development using JAVA	3
BNA 3003	Systems Analysis	3
BNA 3133	Database Design and Implementation	3
BNA 3103	Principles of Business Analytics	3
BNA 4103	Advanced Business Analytics	3
BNA 4203	Business Analytics Research Project	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3
MGT 4043	Management Science	3
QMT 3013	Business Process Management	3
STS 3113	Advanced Statistical Models	3

Information Management Concentration		
Required Credits: 15		
BNA 4023	Big-Data and Advanced Data Mining	3
BNA 4033	Data Visualisation Techniques and Tools	3
BNA 4113	Applied Marketing Analytics and Reporting	3
BNA 4123	Ethics and Security in Analytics	3
CIB 4133	Customer Relationship Management Systems	3

Business Analytics Elective Courses		
Required Credits: 15		
BNA 4023	Big-Data and Advanced Data Mining	3
BNA 4033	Data Visualisation Techniques and Tools	3
BNA 4113	Applied Marketing Analytics and Reporting	3
CIB 4133	Customer Relationship Management Systems	3
BNA 4123	Ethics and Security in Analytics	3

General Studies	
Required Credits: 33	
English, Arabic or other Languages	15
Humanities or Art	3
Information Technology or Mathematics	3
The Natural Sciences	3
The Social or Behavioural Sciences	9

<i>Total Required Credits</i>	<i>132</i>
<i>Maximum Duration of Study</i>	<i>6</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4</i>
<i>Program Code</i>	<i>BUBNA</i>
<i>Major Code</i>	<i>BNA</i>

Recommended Sequence of Study

Bachelor of Business Analytics

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
ACC 1003	Financial Accounting	3	ACC 1103	Managerial Accounting	3
ECO 1003	Microeconomics	3	ECO 1103	Macroeconomics	3
MGT 1003	Principles of Management	3	MRK 1103	Principles of Marketing	3
LSM 1003	Applied Mathematics (GS)	3	LSS 1123	Methods of Research (GS)	3
LSS 1003	Life and Study Skills (GS)	3	LSC 1103	Academic Reading and Writing I (GS)	3
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 15			Required Credits: 15		
CIS 2103	Principles of Information Assurance, Security and Privacy	3	BNA 2103	Business Applications Development using JAVA	3
FIN 2003	Financial Management	3	MGT 2103	Organizational Behavior	3
STS 2003	Business Statistics	3	OPM 2103	Operations Management	3
AES 1013	Arabic Communication (GS)	3	AES 1003	Emirati Studies (GS)	3
LSC 2103	Academic Reading and Writing II (GS)	3	LSC 1503	Academic Spoken Communication (GS)	3
Year 2 Summer Semester			Year 3 Semester 6		
Required Credits: 6			Required Credits: 15		
INT 2156	Business Internship 1	6	BNA 3133	Database Design and Implementation	3
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 15			Required Credits: 15		
BNA 3003	Systems Analysis	3	BNA 3103	Principles of Business Analytics	3
QMT 3013	Business Process Management	3	LAW 3103	Business and Commercial Law	3
BIS 3003	Business Information Systems	3	MGT 3103	Strategic Management and Simulation	3
MGT 3003	Business Ethics and Corporate Governance	3	LSS 2403	Innovation and Entrepreneurship (GS)	3
LSN 1113	Intro to Sustainability (GS)	3			
Year 3 Summer Semester			Year 4 Semester 7		
Required Credits: 6			Required Credits: 15		
INT 3156	Business Internship 2	6	STS 3103	Advanced Statistical Models	3
Higher Diploma in Business Analytics Exit			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
MGT 4043	Management Science	3	BNA 4103	Advanced Business Analytics	3
	Elective	3	BNA 4203	Business Analytics Research Project	3
	Elective	3		Elective	3
AES 3003	Professional Arabic (GS)	3		Elective	3

Bachelor of Finance

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Bachelor of Finance program seeks to produce graduates able to function effectively in managerial and practitioner roles in the specialized field of Finance. Graduates will have the skills, values and ability to explain, analyze and evaluate complex Finance processes in local and global contexts, while demonstrating the ability to work independently, or in teams, to think critically, solve problems, make recommendations for improvements, and use advanced Finance tools.

Program Description

The Bachelor of Finance program provides students with the knowledge and skills needed to work as competent finance professionals. Successful completion of the program will enable graduates to work in a variety of public and private sector organizations. The program places emphasis on both theoretical and applied aspects of finance practitioner work, with students exposed to contemporary finance tools and techniques.

The program offers two distinct concentrations – Investments and Islamic Finance:

For the **Investments concentration**, students take – FIN 4023, FIN 4033, FIN 4113, FIN 4123 and FIN 4133 elective courses

For the **Islamic Finance concentration**, students take – FIN 4043, FIN 4053, FIN 4143, FIN 4153 and FIN 4163 elective courses

Students will have the option to graduate with a Higher Diploma in Finance upon the successful completion of 102 credits inclusive of the two internship courses.

Program Goals

To develop graduates who possess the

- Current knowledge and understanding of key areas of the Finance field, their interrelationship and application.
- Ability to use the Finance tools, think critically, and conduct applied research.
- Necessary key success skills in business
- In depth knowledge of the Finance field and its interrelationship and application across business environments.

Program Learning Outcomes

Degree Level

Students will be able to...

1. Demonstrate in-depth knowledge of Finance areas and tools.
2. Use appropriate tools to solve complex authentic problems in Finance contexts.
3. Conduct research and critically evaluate arguments, abstract concepts and data, to examine issues in Finance.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Finance contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.
7. Demonstrate the ability to apply Finance principles to various real world situations.

Higher Diploma Exit

Students will be able to...

1. Demonstrate knowledge of Finance principles, concepts and tools.
2. Use appropriate tools to solve problems in Finance contexts.
3. Conduct research and examine arguments, concepts and data, to assess issues in Finance.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Finance contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.

Completion Requirements

Course Credits		
Business Core Courses		
Required Credits: 54		
ECO 1003	Microeconomics	3
MGT 1003	Principles of Management	3
ACC 1003	Financial Accounting	3
MRK 1103	Principles of Marketing	3
ECO 1103	Macroeconomics	3
ACC 1103	Managerial Accounting	3
STS 2003	Business Statistics	3
FIN 2003	Financial Management	3
OPM 2103	Operations Management	3
MGT 2103	Organizational Behaviour	3
BIS 3003	Business Information Systems	3
MGT 3003	Business Ethics and Corporate Governance	3
MGT 3103	Strategic Management and Simulation	3
LAW 3103	Business and Commercial Law	3
INT 2156	Business Internship 1	6
INT 3156	Business Internship 2	6
Finance Core Courses		
Required Credits: 30		
FIN 2013	Money and Banking	3
FIN 2103	Quantitative Methods	3
FIN 3003	Corporate Finance	3
FIN 3013	Insurance	3
FIN 3103	Corporate Governance and Professional Standards	3
FIN 3113	Behavioural Finance	3
FIN 4003	Entrepreneurial Finance	3
FIN 4013	Corporate and Retail Banking	3
FIN 4103	Bank Financial Management	3
FIN 4203	Finance Research Project	3
Investments Concentration		
Required Credits: 15		
FIN 4023	Financial Assets and Markets	3
FIN 4033	Financial Analysis	3
FIN 4113	International Finance	3
FIN 4123	Capital Investment	3
FIN 4133	Portfolio Management and Wealth Planning	3
Islamic Finance Concentration		
Required Credits: 15		
FIN 4043	Sharia Law and Corporate Governance	3
FIN 4053	Islamic Financial Markets	3
FIN 4143	Islamic Economics	3
FIN 4153	Islamic Banking	3
FIN 4163	Risk Management of Islamic Financial Institutions	3

Course Credits		
Finance Elective Courses (For Students not pursuing a Concentration)		
Required Credits: 15		
FIN 4023	Financial Assets and Markets	3
FIN 4033	Financial Analysis	3
FIN 4113	International Finance	3
FIN 4123	Capital Investment	3
FIN 4133	Portfolio Management and Wealth Planning	3
FIN 4043	Sharia Law and Corporate Governance	3
FIN 4053	Islamic Financial Markets	3
FIN 4143	Islamic Economics	3
FIN 4153	Islamic Banking	3
FIN 4163	Risk Management of Islamic Financial Institutions	3
General Studies		
Required Credits: 33		
English, Arabic or other Languages		15
Humanities or Art		3
Information Technology or Mathematics		3
The Natural Sciences		3
The Social or Behavioural Sciences		9
<i>Total Required Credits</i>		<i>132</i>
<i>Maximum Duration of Study</i>		<i>6</i>
<i>Cost Recovery Program</i>		<i>No</i>
<i>Minimum Duration of Study</i>		<i>4</i>
<i>Program Code</i>		<i>BUFIN</i>
<i>Major Code</i>		<i>FIN</i>

Recommended Sequence of Study

Bachelor of Finance

Course Code	Course Title	Course Credits
Year 1 Semester 1		
Required Credits: 15		
ACC 1003	Financial Accounting	3
ECO 1003	Microeconomics	3
MGT 1003	Principles of Management	3
LSM 1003	Applied Mathematics (GS)	3
LSS 1003	Life and Study Skills (GS)	3

Year 2 Semester 3		
Required Credits: 15		
FIN 2013	Money and Banking	3
FIN 2003	Financial Management	3
STS 2003	Business Statistics	3
AES 1013	Arabic Communication (GS)	3
LSC 2103	Academic Reading and Writing II (GS)	3

Year 2 Summer Semester		
Required Credits: 6		
INT 2156	Business Internship 1	6

Year 3 Semester 5		
Required Credits: 15		
FIN 3003	Corporate Finance	3
FIN 3013	Insurance	3
BIS 3003	Business Information Systems	3
MGT 3003	Business Ethics and Corporate Governance	3
LSN 1113	Intro to Sustainability (GS)	3

Year 3 Summer Semester		
Required Credits: 6		
INT 3156	Business Internship 2	6

Higher Diploma in Finance Exit

Year 4 Semester 7		
Required Credits: 15		
FIN 4003	Entrepreneurial Finance	3
FIN 4013	Corporate and Retail Banking	3
	Elective	3
	Elective	3
AES 3003	Professional Arabic (GS)	3

Course Code	Course Title	Course Credits
Year 1 Semester 2		
Required Credits: 15		
ACC 1103	Managerial Accounting	3
ECO 1103	Macroeconomics	3
MRK 1103	Principles of Marketing	3
LSS 1123	Methods of Research (GS)	3
LSC 1103	Academic Reading and Writing I (GS)	3

Year 2 Semester 4		
Required Credits: 15		
FIN 2103	Quantitative Methods	3
MGT 2103	Organizational Behavior	3
OPM 2103	Operations Management	3
AES 1003	Emirati Studies (GS)	3
LSC 1503	Academic Spoken Communication (GS)	3

Year 3 Semester 6		
Required Credits: 15		
FIN 3103	Corporate Governance and Professional Standards	3
FIN 3113	Behavioural Finance	3
LAW 3103	Business and Commercial Law	3
MGT 3103	Strategic Management and Simulation	3
LSS 2403	Innovation and Entrepreneurship (GS)	3

Year 4 Semester 8		
Required Credits: 15		
FIN 4103	Bank Financial Management	3
FIN 4203	Finance Research Project	3
	Elective	3
	Elective	3
	Elective	3

Bachelor of Human Resource Management

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

The Bachelor of Human Resource Management program strives to produce graduates able to function effectively as people and talent managers. Graduates will have the skills, knowledge and ability to analyze and evaluate complex people management issues in local and global contexts, while demonstrating the ability to work independently, or in teams, to think critically, solve problems, make recommendations for improvements, and use a range of HRM analytic tools.

Program Mission

The Bachelor of Human Resource Management program seeks to produce graduates able to function effectively in managerial and practitioner roles in the specialized field of Human Resource Management. Graduates will have the skills, values and ability to explain, analyze and evaluate complex Human Resource Management processes in local and global contexts, while demonstrating the ability to work independently, or in teams, to think critically, solve problems, make recommendations for improvements, and use advanced Human Resource Management tools.

Program Description

The Bachelor of Human Resource Management program provides students with the knowledge and skills needed to work as competent HRM professionals. Successful completion of the program will enable graduates to work in a variety of public and private sector organizations. The program places emphasis on structured techniques and best practices for managing talent and human capital, with a variety of analytic frameworks presented.

The program offers two distinct concentrations:

HRM-Strategy and Talent Management concentration

For the **HRM-Strategy concentration**, students take HRM 4043, HRM 4053, HRM 4133, HRM 4143 and HRM 4153 elective courses

For the **Talent Management concentration**, students take – HRM 4023, HRM 4033, HRM 4113, HRM 4123 and HRM 4133 elective courses.

Students will have the option to graduate with a Higher Diploma in HRM upon the successful completion of 102 credits inclusive of the two internship courses.

Program Goals

Develop graduates who possess the

- Current knowledge and understanding of key areas of the Human Resource Management field, their interrelationship and application.
- Ability to use the Human Resource Management tools, think critically, and conduct applied research.
- Necessary key success skills in business.
- In depth knowledge of the Human Resource Management field and its interrelationship and application across business environments.

Program Learning Outcomes

Degree Level

Students will be able to...

1. Demonstrate in-depth knowledge of Human Resource Management areas and tools.
2. Use appropriate tools to solve complex authentic problems in Human Resource Management contexts.
3. Conduct research and critically evaluate arguments, abstract concepts and data, to examine issues in Human Resource Management.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Human Resource Management contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.
7. Demonstrate the ability to apply Human Resource Management principles to various real world situations.

Higher Diploma Exit

Students will be able to...

1. Demonstrate knowledge of Human Resource Management principles, concepts and tools.
2. Use appropriate tools to solve problems in Human Resource Management contexts.
3. Conduct research and examine arguments, concepts and data, to assess issues in Human Resource Management.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Human Resource Management contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.

Completion Requirements

Course Credits

Business Core Courses		
Required Credits: 54		
ECO 1003	Microeconomics	3
MGT 1003	Principles of Management	3
ACC 1003	Financial Accounting	3
MRK 1103	Principles of Marketing	3
ECO 1103	Macroeconomics	3
ACC 1103	Managerial Accounting	3
STS 2003	Business Statistics	3
FIN 2003	Financial Management	3
OPM 2103	Operations Management	3
MGT 2103	Organizational Behaviour	3
BIS 3003	Business Information Systems	3
MGT 3003	Business Ethics and Corporate Governance	3
MGT 3103	Strategic Management and Simulation	3
LAW 3103	Business and Commercial Law	3
INT 2156	Business Internship 1	6
INT 3156	Business Internship 2	6

Human Resource Management Core Courses		
Required Credits: 30		
HRM 2003	Professional Practice in Human Resource	3
HRM 2103	Recruitment and Selection	3
HRM 3003	Performance Management	3
HRM 3013	Organisational Change Management	3
HRM 3103	Training and Development	3
HRM 3113	Career Development and Planning	3
HRM 4003	Employee Relations and UAE Labour Law	3
HRM 4013	Compensations and Benefits	3
HRM 4103	International Human Resource Management	3
HRM 4203	HRM Research Project	3

HRM Strategy Concentration		
Required Credits: 15		
HRM 4043	Occupational Health and Safety	3
HRM 4053	Organization Design & Development	3
HRM 4133	Managing Diversity & Inclusion	3
HRM 4143	Strategic HRM and HR Analytics	3
HRM 4153	HRM Information Systems	3

Talent Management Concentration		
Required Credits: 15		
HRM 4023	Resourcing and Talent Planning	3
HRM 4033	Managing Communications & Emotional Intelligence for HRM	3
HRM 4113	Negotiation and Workplace Dispute Resolution	3
HRM 4123	Employee Development through Coaching & Mentoring	3
HRM 4133	Managing Diversity & Inclusion	3

Human Resource Management Elective Courses (For Students not pursuing a Concentration)		
Required Credits: 15		
HRM 4023	Resourcing and Talent Planning	3
HRM 4033	Managing Communications & Emotional Intelligence for HRM	3
HRM 4113	Negotiation and Workplace Dispute Resolution	3
HRM 4123	Employee Development through Coaching & Mentoring	3
HRM 4133	Managing Diversity & Inclusion	3
HRM 4043	Occupational Health and Safety	3
HRM 4133	Organization Design & Development	3
HRM 4053	Managing Diversity & Inclusion	3
HRM 4143	Strategic HRM and HR Analytics	3
HRM 4153	HRM Information Systems	3

General Studies	
Required Credits: 33	
English, Arabic or other Languages	15
Humanities or Art	3
Information Technology or Mathematics	3
The Natural Sciences	3
The Social or Behavioural Sciences	9

<i>Total Required Credits</i>	<i>132</i>
<i>Maximum Duration of Study</i>	<i>6</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4</i>
<i>Program Code</i>	<i>BUHRM</i>
<i>Major Code</i>	<i>HRM</i>

Recommended Sequence of Study

Bachelor of Human Resource Management

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
ACC 1003	Financial Accounting	3	ACC 1103	Managerial Accounting	3
ECO 1003	Microeconomics	3	ECO 1103	Macroeconomics	3
MGT 1003	Principles of Management	3	MRK 1103	Principles of Marketing	3
LSM 1003	Applied Mathematics (GS)	3	LSS 1123	Methods of Research (GS)	3
LSS 1003	Life and Study Skills (GS)	3	LSC 1103	Academic Reading and Writing I (GS)	3
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 15			Required Credits: 15		
HRM 2003	Professional Practice in Human Resource	3	HRM 2103	Recruitment and Selection	3
FIN 2003	Financial Management	3	MGT 2103	Organizational Behavior	3
STS 2003	Business Statistics	3	OPM 2103	Operations Management	3
AES 1013	Arabic Communication (GS)	3	AES 1003	Emirati Studies (GS)	3
LSC 2103	Academic Reading and Writing II (GS)	3	LSC 1503	Academic Spoken Communication (GS)	3
Year 2 Summer Semester			Year 3 Semester 6		
Required Credits: 6			Required Credits: 15		
INT 2156	Business Internship 1	6	HRM 3103	Training and Development	3
Year 3 Semester 5			HRM 3113	Career Development and Planning	3
Required Credits: 15			LAW 3103	Business and Commercial Law	3
HRM 3003	Performance Management	3	MGT 3103	Strategic Management and Simulation	3
HRM 3013	Organizational Change Management	3	LSS 2403	Innovation and Entrepreneurship (GS)	3
BIS 3003	Business Information Systems	3	Year 3 Summer Semester		
MGT 3003	Business Ethics and Corporate Governance	3	Required Credits: 6		
LSN 1113	Intro to Sustainability (GS)	3	INT 3156	Business Internship 2	6
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
HRM 4003	Employee Relations and UAE Labour Law	3	HRM 4103	International Human Resource Management	3
HRM 4013	Compensations and Benefits	3	HRM 4203	HRM Research Project	3
	Elective	3		Elective	3
	Elective	3		Elective	3
AES 3003	Professional Arabic (GS)	3		Elective	3

Higher Diploma in Human Resource Management Exit

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
HRM 4003	Employee Relations and UAE Labour Law	3	HRM 4103	International Human Resource Management	3
HRM 4013	Compensations and Benefits	3	HRM 4203	HRM Research Project	3
	Elective	3		Elective	3
	Elective	3		Elective	3
AES 3003	Professional Arabic (GS)	3		Elective	3

Bachelor of Innovation and Entrepreneurship Management

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Bachelor of Innovation and Entrepreneurship Management program seeks to produce graduates able to function effectively in managerial and practitioner roles in the specialized field of Innovation and Entrepreneurship Management. Graduates will have the skills, values and ability to explain, analyze and evaluate complex Innovation and Entrepreneurship Management processes in local and global contexts, while demonstrating the ability to work independently, or in teams, to think critically, solve problems, make recommendations for improvements, and use advanced Innovation and Entrepreneurship Management tools.

Program Description

The Bachelor of Innovation and Entrepreneurship Management program provides students with the knowledge and skills needed to create and grow new enterprises in a sustainable manner. Successful completion of the program will enable graduates to work in a variety of public and private sector organizations as intrapreneurs, or as standalone entrepreneurs. The program teaches formal methods for structured business growth and management of key activities.

In addition to the core Innovation and Entrepreneurship Management qualification, the program offers a concentration in Entrepreneurial Management.

For the **Entrepreneurial Management concentration**, students take – ENT 4003, ENT 4013, ENT 4103, ENT 4113 and ENT 4133 elective courses.

Students will have the option to graduate with a Higher Diploma in Innovation and Entrepreneurship Management upon the successful completion of 102 credits inclusive of the two internship courses.

Program Goals

To develop graduates who possess the

- Current knowledge and understanding of key areas of the Innovation and Entrepreneurship Management field, their interrelationship and application.
- Ability to use the Innovation and Entrepreneurship Management tools, think critically, and conduct applied research.

- Necessary key success skills in business.
- In depth knowledge of the Innovation and Entrepreneurship Management field and its interrelationship and application across business environments.

Program Learning Outcomes

Degree Level:

Students will be able to...

1. Demonstrate in-depth knowledge of Innovation and Entrepreneurship Management theories, concepts areas and tools.
2. Use appropriate tools to solve complex authentic problems in Innovation and Entrepreneurship Management contexts.
3. Conduct research and critically evaluate arguments, abstract concepts and data, to evaluate/examine issues in Innovation and Entrepreneurship Management situations.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical Entrepreneurship Management decisions in global and local Innovation and Entrepreneurship Management contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts. Effectively communicate in Arabic and English in both oral and written forms in business contexts.
7. Demonstrate in depth knowledge of the ability to apply Innovation and Entrepreneurship Management discipline/principles to various real world situations.

Higher Diploma Exit

Students will be able to...

1. Demonstrate knowledge of Innovation and Entrepreneurship Management principles, concepts and tools.
2. Use appropriate tools to solve problems in Innovation and Entrepreneurship Management contexts.
3. Conduct research and examine arguments, concepts and data, to assess issues in Innovation and Entrepreneurship Management.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Innovation and Entrepreneurship Management contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.

Completion Requirements

Business Core Courses		
Required Credits: 54		
ECO 1003	Microeconomics	3
MGT 1003	Principles of Management	3
ACC 1003	Financial Accounting	3
MRK 1103	Principles of Marketing	3
ECO 1103	Macroeconomics	3
ACC 1103	Managerial Accounting	3
STS 2003	Business Statistics	3
FIN 2003	Financial Management	3
OPM 2103	Operations Management	3
MGT 2103	Organizational Behaviour	3
BIS 3003	Business Information Systems	3
MGT 3003	Business Ethics and Corporate Governance	3
MGT 3103	Strategic Management and Simulation	3
LAW 3103	Business and Commercial Law	3
INT 2156	Business Internship 1	6
INT 3156	Business Internship 2	6

Innovation and Entrepreneurship Core Courses		
Required Credits: 30		
ENT 2003	New Venture Creation	3
ENT 2103	Business Negotiations	3
FIN 4003	Entrepreneurial Finance	3
ENT 3023	Small Business Management	3
ENT 3103	Leadership for Entrepreneurs	3
ENT 3113	Entrepreneurial Marketing	3
ENT 3033	Social Entrepreneurship	3
ENT 4033	Raising Funds	3
BNA 4113	Advanced Marketing Analytics and Reporting	3
ENT 4203	Innovation and Entrepreneurial Research Project	3

Entrepreneurial Management Concentration		
Required Credits: 15		
ENT 4003	Collaborative and Affordable Design for Entrepreneurs	3
ENT 4013	New Venture Growth Strategies	3
ENT 4103	Managing Innovation	3
ENT 4113	Commercialization of Innovation	3
ENT 4133	Managing Intrapreneurship and Organizational Change	3

Innovation and Entrepreneurship Elective Courses		
Required Credits: 15		
ENT 4003	Collaborative and Affordable Design for Entrepreneurs	3
ENT 4013	New Venture Growth Strategies	3
ENT 4103	Managing Innovation	3
ENT 4113	Commercialization of Innovation	3
ENT 4133	Managing Intrapreneurship and Organisational Change	3

General Studies	
Required Credits: 33	
English, Arabic or other Languages	15
Humanities or Art	3
Information Technology or Mathematics	3
The Natural Sciences	3
The Social or Behavioural Sciences	9

<i>Total Required Credits</i>	<i>132</i>
<i>Maximum Duration of Study</i>	<i>6</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4</i>
<i>Program Code</i>	<i>BUENT</i>
<i>Major Code</i>	<i>ENT</i>

Recommended Sequence of Study

Bachelor of Innovation and Entrepreneurship Management

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
ACC 1003	Financial Accounting	3	ACC 1103	Managerial Accounting	3
ECO 1003	Microeconomics	3	ECO 1103	Macroeconomics	3
MGT 1003	Principles of Management	3	MRK 1103	Principles of Marketing	3
LSM 1003	Applied Mathematics (GS)	3	LSS 1123	Methods of Research (GS)	3
LSS 1003	Life and Study Skills (GS)	3	LSC 1103	Academic Reading and Writing I (GS)	3
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 15			Required Credits: 15		
ENT 2003	New Venture Creation	3	ENT 2103	Business Negotiations	3
FIN 2003	Financial Management	3	MGT 2103	Organizational Behavior	3
STS 2003	Business Statistics	3	OPM 2103	Operations Management	3
AES 1013	Arabic Communication (GS)	3	AES 1003	Emirati Studies (GS)	3
LSC 2103	Academic Reading and Writing II (GS)	3	LSC 1503	Academic Spoken Communication (GS)	3
Year 2 Summer Semester			Year 3 Semester 6		
Required Credits: 6			Required Credits: 15		
INT 2156	Business Internship 1	6	ENT 3103	Leadership for Entrepreneurs	3
Year 3 Semester 5			ENT 3113	Entrepreneurial Marketing	3
Required Credits: 15			LAW 3103	Business and Commercial Law	3
ENT 3033	Social Entrepreneurship	3	MGT 3103	Strategic Management and Simulation	3
ENT 3023	Small Business Management	3	LSS 2403	Innovation and Entrepreneurship (GS)	3
BIS 3003	Business Information Systems	3			
MGT 3003	Business Ethics and Corporate Governance	3			
LSN 1113	Intro to Sustainability (GS)	3			
Year 3 Summer Semester					
Required Credits: 6					
INT 3156	Business Internship 2	6			
Higher Diploma in Innovation and Entrepreneurship Management Exit					
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
FIN 4003	Entrepreneurial Finance	3	BNA 4113	Advanced Marketing Analytics and Reporting	3
ENT 4033	Raising Funds	3	ENT 4203	Innovation and Entrepreneurial Research Project	3
	Elective	3		Elective	3
	Elective	3		Elective	3
AES 3003	Professional Arabic (GS)	3		Elective	3

Bachelor of Logistics and Supply Chain Management

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Bachelor of Logistics and Supply Chain Management program seeks to produce graduates able to function effectively in managerial and practitioner roles in the specialized field of Logistics and Supply Chain Management. Graduates will have the skills, values and ability to explain, analyze and evaluate complex Logistics and Supply Chain Management processes in local and global contexts, while demonstrating the ability to work independently, or in teams, to think critically, solve problems, make recommendations for improvements, and use advanced Logistics and Supply Chain Management tools.

Program Description

Business students in Logistics and Supply Chain Management will learn to efficiently integrate the flow of materials, finances, and information from suppliers, manufacturers, wholesalers, distributors, and retailers to the final customer and back again.

Graduates from this program will gain planning and organizational skills, quantitative and analytical skills, contract negotiation and information technology related skills as they learn the science of managing global operations. Graduates with a degree in logistics and supply chain management will be able to seek employment with a wide range of industries including manufacturing, wholesale, distribution, transportation, retail, petroleum and the healthcare industry.

In addition to the core Logistics and Supply Chain Management qualification, the program offers a concentration in Procurement.

For the **Procurement concentration**, students take – SLM 4033, SLM 4103, SLM 4113, SLM 4123 and QMT 4053 elective courses

Students will have the option to graduate with a Higher Diploma in Logistics and Supply Chain Management upon the successful completion of 102 credits inclusive of the two internship courses.

Program Goals

To develop graduates who possess the

- Current knowledge and understanding of key areas in of

the Logistics and Supply Chain Management field, their interrelationship and application.

- Ability to use the Logistics and Supply Chain Management theories, concepts and instrumentstools, think critically, and conduct applied research.
- Necessary key success skills in business.
- In depth knowledge of the Logistics and Supply Chain Management field and its interrelationship and application across business environments.

Program Learning Outcomes

Degree Level

Students will be able to...

1. Demonstrate in-depth knowledge of Logistics and Supply Chain Management areas and tools.
2. Use appropriate tools to solve complex authentic problems in Logistics and Supply Chain Management contexts.
3. Conduct research and critically evaluate arguments, abstract concepts and data, to examine issues in Logistics and Supply Chain Management.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Logistics and Supply Chain Management contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.
7. Demonstrate the ability to apply Logistics and Supply Chain Management principles to various real world situations.

Higher Diploma Exit

Students will be able to...

1. Demonstrate knowledge of Logistics and Supply Chain Management principles, concepts and tools.
2. Use appropriate tools to solve problems in Logistics and Supply Chain Management contexts.
3. Conduct research and examine arguments, concepts and data, to assess issues in Logistics and Supply Chain Management.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Logistics and Supply Chain Management contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.

Completion Requirements

Course Credits

Business Core Courses		
Required Credits: 54		
ECO 1003	Microeconomics	3
MGT 1003	Principles of Management	3
ACC 1003	Financial Accounting	3
MRK 1103	Principles of Marketing	3
ECO 1103	Macroeconomics	3
ACC 1103	Managerial Accounting	3
STS 2003	Business Statistics	3
FIN 2003	Financial Management	3
OPM 2103	Operations Management	3
MGT 2103	Organizational Behaviour	3
BIS 3003	Business Information Systems	3
MGT 3003	Business Ethics and Corporate Governance	3
MGT 3103	Strategic Management and Simulation	3
LAW 3103	Business and Commercial Law	3
INT 2156	Business Internship 1	6
INT 3156	Business Internship 2	6

Logistics and Supply Chain Management Core Courses		
Required Credits: 30		
SLM 2003	Supply Chain Management	3
QMT 2003	Total Quality Management	3
SLM 3003	Supplier Management	3
STS 3113	Advanced Statistical Models	3
SLM 3013	Warehouse and Distribution Management	3
SLM 3113	Logistics Management	3
SLM 4003	Supply Chain Risk Management	3
SLM 4013	Supply Chain Operations Planning and Control	3
QMT 4103	Project Management	3
SLM 4203	Logistics and Supply Chain Final Project	3

Procurement Concentration		
Required Credits: 15		
QMT 4053	Lean Management	3
SLM 4033	Procurement and Inventory Management	3
SLM 4103	Sourcing in Procurement	3
SLM 4113	Negotiating and Contracting in Procurement	3
SLM 4123	Managing Relationships in Procurement	3

Logistics and Supply Chain Management Elective Courses		
Required Credits: 15		
SLM 4033	Procurement and Inventory Management	3
SLM 4103	Sourcing in Procurement	3
SLM 4113	Negotiating and Contracting in Procurement	3
SLM 4123	Managing Relationships in Procurement	3
QMT 4053	Lean Management	3

General Studies	
Required Credits: 33	
English, Arabic or other Languages	15
Humanities or Art	3
Information Technology or Mathematics	3
The Natural Sciences	3
The Social or Behavioural Sciences	9

<i>Total Required Credits</i>	<i>132</i>
<i>Maximum Duration of Study</i>	<i>6</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4</i>
<i>Program Code</i>	<i>BUSLM</i>
<i>Major Code</i>	<i>SLM</i>

Recommended Sequence of Study

Bachelor of Logistics and Supply Chain Management

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
ACC 1003	Financial Accounting	3	ACC 1103	Managerial Accounting	3
ECO 1003	Microeconomics	3	ECO 1103	Macroeconomics	3
MGT 1003	Principles of Management	3	MRK 1103	Principles of Marketing	3
LSM 1003	Applied Mathematics (GS)	3	LSS 1123	Methods of Research (GS)	3
LSS 1003	Life and Study Skills (GS)	3	LSC 1103	Academic Reading and Writing I (GS)	3
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 15			Required Credits: 15		
SLM 2003	Supply Chain Management	3	QMT 2003	Total Quality Management	3
FIN 2003	Financial Management	3	MGT 2103	Organizational Behavior	3
STS 2003	Business Statistics	3	OPM 2103	Operations Management	3
AES 1013	Arabic Communication (GS)	3	AES 1003	Emirati Studies (GS)	3
LSC 2103	Academic Reading and Writing II (GS)	3	LSC 1503	Academic Spoken Communication (GS)	3
Year 2 Summer Semester			Year 3 Semester 6		
Required Credits: 6			Required Credits: 15		
INT 2156	Business Internship 1	6	STS 3113	Advanced Statistical Models	3
Year 3 Semester 5			Required Credits: 15		
Required Credits: 15			SLM 3113	Logistics Management	3
SLM 3003	Supplier Management	3	LAW 3103	Business and Commercial Law	3
SLM 3013	Warehouse and Distribution Management	3	MGT 3103	Strategic Management and Simulation	3
BIS 3003	Business Information Systems	3	LSS 2403	Innovation and Entrepreneurship (GS)	3
MGT 3003	Business Ethics and Corporate Governance	3			
LSN 1113	Intro to Sustainability (GS)	3			
Year 3 Summer Semester			Year 4 Semester 7		
Required Credits: 6			Required Credits: 15		
INT 3156	Business Internship 2	6	SLM 4003	Supply Chain Risk Management	3
Higher Diploma in Logistics and Supply Chain Management Exit			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
SLM 4013	Supply Chain Operations Planning and Control	3	QMT 4103	Project Management	3
	Elective	3	SLM 4203	Logistics and Supply Chain Final Project	3
	Elective	3		Elective	3
AES 3003	Professional Arabic (GS)	3		Elective	3
				Elective	3

Bachelor of Marketing

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Bachelor of Marketing program seeks to produce graduates able to function effectively in managerial and practitioner roles in the specialized field of Marketing . Graduates will have the skills, values and ability to explain, analyze and evaluate complex Marketing processes in local and global contexts, while demonstrating the ability to work independently, or in teams, to think critically, solve problems, make recommendations for improvements, and use advanced Marketing tools.

Program Description

The Marketing program and digital concentration will equip the student with the latest digital marketing knowledge and skills needed in today's globalized economy.

During the program students will develop knowledge of digital marketing using the latest tools and techniques. Through the application of the knowledge gained, they will understand how to develop digital marketing strategies leading to competitive advantage.

The main topics covered include: Consumer Behaviour, Integrated Marketing Communications, Brand Management, International Marketing, Digital Marketing, Social Media and Mobile Marketing.

In addition to the core Marketing qualification, the program offers a concentration in Digital Marketing.

For the **Digital Marketing concentration**, students take – MRK 3113, MRK 4033, MRK 4113, BNA 4113 and MRK 4123 elective courses.

Students will have the option to graduate with a Higher Diploma in Marketing upon the successful completion of 102 credits inclusive of the two internship courses.

Program Goals

Develop graduates who possess the

- Current knowledge and understanding of key areas of the Marketing field, their interrelationship and application.
- Ability to use the Marketing tools, think critically, and conduct applied research.

- Necessary key success skills in business.
- In depth knowledge of the Marketing field and its interrelationship and application across business environments.

Program Learning Outcomes

Degree Level

Students will be able to...

1. Demonstrate in-depth knowledge of Marketing areas and tools.
2. Use appropriate tools to solve complex authentic problems in Marketing contexts.
3. Conduct research and critically evaluate arguments, abstract concepts and data, to examine issues in Marketing .
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Marketing contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.
7. Demonstrate the ability to apply Marketing principles to various real world situations.

Higher Diploma Exit

Students will be able to...

1. Demonstrate knowledge of Marketing principles, concepts and tools.
2. Use appropriate tools to solve problems in Marketing contexts.
3. Conduct research and examine arguments, concepts and data, to assess issues in Marketing .
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Marketing contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.

Completion Requirements

		Course Credits
Business Core Courses		
Required Credits: 54		
ECO 1003	Microeconomics	3
MGT 1003	Principles of Management	3
ACC 1003	Financial Accounting	3
MRK 1103	Principles of Marketing	3
ECO 1103	Macroeconomics	3
ACC 1103	Managerial Accounting	3
STS 2003	Business Statistics	3
FIN 2003	Financial Management	3
OPM 2103	Operations Management	3
MGT 2103	Organizational Behaviour	3
BIS 3003	Business Information Systems	3
MGT 3003	Business Ethics and Corporate Governance	3
MGT 3103	Strategic Management and Simulation	3
LAW 3103	Business and Commercial Law	3
INT 2156	Business Internship 1	6
INT 3156	Business Internship 2	6
Marketing Core Courses		
Required Credits: 30		
MRK 2003	Consumer Behaviour	3
MRK 2103	Marketing Metrics	3
MRK 3003	Integrated Marketing Communications	3
MRK 3013	Marketing Research	3
MRK 3103	Brand Management	3
MRK 4003	International Marketing Management	3
MRK 4013	Strategic Marketing	3
MRK 4023	Customer Relationship Management	3
MRK 4103	Services Marketing	3
MRK 4203	Marketing Research Project	3
Digital Marketing Concentration		
Required Credits: 15		
BNA 4113	Applied Marketing Analytics and Reporting	3
MRK 3113	Digital Marketing	3
MRK 4033	Digital Tools and Techniques	3
MRK 4113	Data- Driven B2B Marketing	3
MRK 4123	Social Media and Mobile Marketing	3

		Course Credits
Marketing Elective Courses		
Required Credits: 15		
MRK 3113	Digital Marketing	3
MRK 4033	Digital Tools and Techniques	3
MRK 4113	Data- Driven B2B Marketing	3
BNA 4113	Applied Marketing Analytics and Reporting	3
MRK 4123	Social Media and Mobile Marketing	3

		Course Credits
General Studies		
Required Credits: 33		
English, Arabic or other Languages		15
Humanities or Art		3
Information Technology or Mathematics		3
The Natural Sciences		3
The Social or Behavioural Sciences		9

<i>Total Required Credits</i>	<i>132</i>
<i>Maximum Duration of Study</i>	<i>6</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4</i>
<i>Program Code</i>	<i>BUMRK</i>
<i>Major Code</i>	<i>MRK</i>

Recommended Sequence of Study

Bachelor of Marketing

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
ACC 1003	Financial Accounting	3	ACC 1103	Managerial Accounting	3
ECO 1003	Microeconomics	3	ECO 1103	Macroeconomics	3
MGT 1003	Principles of Management	3	MRK 1103	Principles of Marketing	3
LSM 1003	Applied Mathematics (GS)	3	LSS 1123	Methods of Research (GS)	3
LSS 1003	Life and Study Skills (GS)	3	LSC 1103	Academic Reading and Writing I (GS)	3
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 15			Required Credits: 15		
MRK 2003	Consumer Behaviour	3	MRK 2103	Marketing Metrics	3
FIN 2003	Financial Management	3	MGT 2103	Organizational Behavior	3
STS 2003	Business Statistics	3	OPM 2103	Operations Management	3
AES 1013	Arabic Communication (GS)	3	AES 1003	Emirati Studies (GS)	3
LSC 2103	Academic Reading and Writing II (GS)	3	LSC 1503	Academic Spoken Communication (GS)	3
Year 2 Summer Semester			Year 3 Semester 6		
Required Credits: 6			Required Credits: 15		
INT 2156	Business Internship 1	6	MRK 3103	Brand Management	3
Year 3 Semester 5			Required Credits: 15		
Required Credits: 15			MRK 3113	Digital Marketing	3
MRK 3003	Integrated Marketing Communications	3	LAW 3103	Business and Commercial Law	3
MRK 3013	Marketing Research	3	MGT 3103	Strategic Management and Simulation	3
BIS 3003	Business Information Systems	3	LSS 2403	Innovation and Entrepreneurship (GS)	3
MGT 3003	Business Ethics and Corporate Governance	3			
LSN 1113	Intro to Sustainability (GS)	3			
Year 3 Summer Semester			Year 4 Semester 7		
Required Credits: 6			Required Credits: 15		
INT 3156	Business Internship 2	6	MRK 4013	Strategic Marketing	3
Higher Diploma in Marketing Exit			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
MRK 4003	International Marketing Management	3	MRK 4103	Services Marketing	3
	Elective	3	MRK 4203	Marketing Research Project	3
	Elective	3		Elective	3
AES 3003	Professional Arabic (GS)	3		Elective	3
				Elective	3

Bachelor of Quality Management

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Bachelor of Quality Management program seeks to produce graduates able to function effectively in managerial and practitioner roles in the specialized field of Quality Management. Graduates will have the skills, values and ability to explain, analyze and evaluate complex Quality Management processes in local and global contexts, while demonstrating the ability to work independently, or in teams, to think critically, solve problems, make recommendations for improvements, and use advanced Quality Management tools.

Program Description

The Bachelor of Quality Management degree responds to increased employer demand for professionals with a solid background in operational techniques in manufacturing and service-oriented companies, combined with qualifications in the area of quality and business excellence. Quality management is integral to any organization that aims to offer superb products and services, and gain the trust and loyalty of its customer base.

The program offers two distinct concentrations – Lean Management and Statistical Analysis:

For the **Lean Management concentration**, students take – SLM 4013, QMT 4053, QMT 4123, QMT 4143 and QMT 4153 elective courses

For the **Statistical Analysis concentration**, students take – MGT 4043, QMT 4033, QMT 4113, QMT 4123 and QMT 4133 elective courses

Students will have the option to graduate with a Higher Diploma in Quality Management upon the successful completion of 102 credits inclusive of the two internship courses.

Program Goals

To develop graduates who possess the

- Current knowledge and understanding of key areas of the Quality Management field, their interrelationship and application.
- Ability to use the Quality Management tools, think critically, and conduct applied research.
- Necessary key success skills in business.

- In depth knowledge of the Quality Management field and its interrelationship and application across business environments.

Program Learning Outcomes

Degree Level

Students will be able to...

1. Demonstrate in-depth knowledge of Quality Management areas and tools.
2. Use appropriate tools to solve complex authentic problems in Quality Management contexts.
3. Conduct research and critically evaluate arguments, abstract concepts and data, to examine issues in Quality Management.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Quality Management contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.
7. Demonstrate the ability to apply Quality Management principles to various real world situations.

Higher Diploma Level

Students will be able to...

1. Demonstrate knowledge of Quality Management principles, concepts and tools.
2. Use appropriate tools to solve problems in Quality Management contexts.
3. Conduct research and examine arguments, concepts and data, to assess issues in Quality Management.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Quality Management contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.

Completion Requirements

Business Core Courses			Course Credits
Required Credits: 54			
ECO 1003	Microeconomics	3	
MGT 1003	Principles of Management	3	
ACC 1003	Financial Accounting	3	
MRK 1103	Principles of Marketing	3	
ECO 1103	Macroeconomics	3	
ACC 1103	Managerial Accounting	3	
STS 2003	Business Statistics	3	
FIN 2003	Financial Management	3	
OPM 2103	Operations Management	3	
MGT 2103	Organizational Behaviour	3	
BIS 3003	Business Information Systems	3	
MGT 3003	Business Ethics and Corporate Governance	3	
MGT 3103	Strategic Management and Simulation	3	
LAW 3103	Business and Commercial Law	3	
INT 2156	Business Internship 1	6	
INT 3156	Business Internship 2	6	

Quality Management Core Courses			
Required Credits: 30			
QMT 2003	Total Quality Management	3	
QMT 2103	Quality Standards and Excellence Models	3	
QMT 3003	Quality Management Tools	3	
QMT 3013	Business Process Management	3	
HRM 3013	Organizational Change Management	3	
STS 3113	Advanced Statistical Models	3	
QMT 4003	Service Quality Managements	3	
QMT 4013	Advanced Strategic Management	3	
QMT 4103	Project Management	3	
QMT 4203	Quality Management Research Project	3	

Lean Management Concentration			
Required Credits: 15			
SLM 4013	Supply Chain Operations Planning and Control	3	
QMT 4053	Lean Management	3	
QMT 4123	Six Sigma	3	
QMT 4143	Value Stream Management	3	
QMT 4153	Quality Auditing	3	

Statistical Analysis Concentration			
Required Credits: 15			
MGT 4043	Management Science	3	
QMT 4033	Statistical Quality Control I	3	
QMT 4113	Experimental Design	3	
QMT 4123	Six Sigma	3	
QMT 4133	Statistical Quality Control II	3	

Quality Management Elective Courses (For Students not pursuing a Concentration)			Course Credits
Required Credits: 15			
MGT 4043	Management Science	3	
QMT 4033	Statistical Quality Control – I	3	
QMT 4113	Experimental Design	3	
QMT 4123	Six Sigma	3	
QMT 4133	Statistical Quality Control – II	3	
QMT 4053	Lean Management	3	
QMT 4143	Value Stream Management	3	
QMT 4153	Quality Auditing	3	
SLM 4013	Supply Chain Operations Planning and Control	3	

General Studies		
Required Credits: 33		
English, Arabic or other Languages		15
Humanities or Art		3
Information Technology or Mathematics		3
The Natural Sciences		3
The Social or Behavioural Sciences		9

<i>Total Required Credits</i>	<i>132</i>
<i>Maximum Duration of Study</i>	<i>6</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4</i>
<i>Program Code</i>	<i>BUQMT</i>
<i>Major Code</i>	<i>QMT</i>

Recommended Sequence of Study

Bachelor of Quality Management

Course Code	Course Title	Course Credits
Year 1 Semester 1		
Required Credits: 15		
ACC 1003	Financial Accounting	3
ECO 1003	Microeconomics	3
MGT 1003	Principles of Management	3
LSM 1003	Applied Mathematics (GS)	3
LSS 1003	Life and Study Skills (GS)	3
Year 2 Semester 3		
Required Credits: 15		
QMT 2003	Total Quality Management	3
FIN 2003	Financial Management	3
STS 2003	Business Statistics	3
AES 1013	Arabic Communication (GS)	3
LSC 2103	Academic Reading and Writing II (GS)	3
Year 2 Summer Semester		
Required Credits: 6		
INT 2156	Business Internship 1	6
Year 3 Semester 5		
Required Credits: 15		
QMT 3003	Quality Management Tools	3
QMT 3013	Business Process Management	3
BIS 3003	Business Information Systems	3
MGT 3003	Business Ethics and Corporate Governance	3
LSN 1113	Intro to Sustainability (GS)	3
Year 3 Summer Semester		
Required Credits: 6		
INT 3156	Business Internship 2	6

Higher Diploma in Quality Management Exit

Course Code	Course Title	Course Credits
Year 4 Semester 7		
Required Credits: 15		
QMT 4003	Service Quality Managements	3
QMT 4013	Advanced Strategic Management	3
	Elective	3
	Elective	3
AES 3003	Professional Arabic (GS)	3

Course Code	Course Title	Course Credits
Year 1 Semester 2		
Required Credits: 15		
ACC 1103	Managerial Accounting	3
ECO 1103	Macroeconomics	3
MRK 1103	Principles of Marketing	3
LSS 1123	Methods of Research	3
LSC 1103	Academic Reading and Writing I (GS)	3
Year 2 Semester 4		
Required Credits: 15		
QMT 2103	Quality Standards and Excellence Models	3
MGT 2103	Organizational Behavior	3
OPM 2103	Operations Management	3
AES 1003	Emirati Studies (GS)	3
LSC 1503	Academic Spoken Communication (GS)	3
Year 3 Semester 6		
Required Credits: 15		
HRM 3013	Organizational Change Management	3
STS 3113	Advanced Statistical Models	3
LAW 3103	Business and Commercial Law	3
MGT 3103	Strategic Management and Simulation	3
LSS 2403	Innovation and Entrepreneurship (GS)	3

Course Code	Course Title	Course Credits
Year 4 Semester 8		
Required Credits: 15		
QMT 4103	Project Management	3
QMT 4203	Quality Research Project	3
	Elective	3
	Elective	3
	Elective	3

Bachelor of Tourism Management

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Bachelor of Tourism Management program seeks to produce graduates able to function effectively in managerial and practitioner roles in the specialized field of Tourism Management. Graduates will have the skills, values and ability to explain, analyze and evaluate complex Tourism Management processes in local and global contexts, while demonstrating the ability to work independently, or in teams, to think critically, solve problems, make recommendations for improvements, and use advanced Tourism Management tools.

Program Description

The program focuses on the expanding Tourism industry and provides students with the essential knowledge and skills to become effective managers in the industry. These include industry knowledge, effective problem-solving, critical and strategic thinking, effective communication and an awareness of the business environment. It provides both academic and vocational preparation for this vibrant and rapidly expanding industry. The course emphasizes the understanding, the application, and the analysis of management skills applied to travel, tourism, events and hospitality.

In addition to the core Tourism Management qualification, the program offers a concentration in Operations.

For the **Operations concentration**, students take – TRM 4023, TRM 4033, TRM 4103, TRM 4113 and TRM 4123 elective courses.

Students will have the option to graduate with a Higher Diploma in Tourism Management upon the successful completion of 102 credits inclusive of the two internship courses.

Program Goals

To develop graduates who possess the

- Current knowledge and understanding of key areas of the Tourism Management field, their interrelationship and application.
- Ability to use the Tourism Management tools, think critically, and conduct applied research.
- Necessary key success skills in business.

- In depth knowledge of the Tourism Management field and its interrelationship and application across business environments.

Program Learning Outcomes

Degree level

Students will be able to...

1. Demonstrate in-depth knowledge of Tourism Management areas and tools.
2. Use appropriate tools to solve complex authentic problems in Tourism Management contexts.
3. Conduct research and critically evaluate arguments, abstract concepts and data, to examine issues in Tourism Management.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Tourism Management contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.
7. Demonstrate the ability to apply Tourism Management principles to various real world situations.

Higher Diploma Level

Students will be able to...

1. Demonstrate knowledge of Tourism Management principles, concepts and tools.
2. Use appropriate tools to solve problems in Tourism Management contexts.
3. Conduct research and examine arguments, concepts and data, to assess issues in Tourism Management.
4. Demonstrate self-development and the ability to work independently and in teams.
5. Make ethical decisions in global and local Tourism Management contexts, including issues related to sustainability and societal responsibility.
6. Effectively communicate in Arabic and English in both oral and written forms in business contexts.

Completion Requirements

Business Core Courses		
Required Credits: 54		
ECO 1003	Microeconomics	3
MGT 1003	Principles of Management	3
ACC 1003	Financial Accounting	3
MRK 1103	Principles of Marketing	3
ECO 1103	Macroeconomics	3
ACC 1103	Managerial Accounting	3
STS 2003	Business Statistics	3
FIN 2003	Financial Management	3
OPM 2103	Operations Management	3
MGT 2103	Organizational Behaviour	3
BIS 3003	Business Information Systems	3
MGT 3003	Business Ethics and Corporate Governance	3
MGT 3103	Strategic Management and Simulation	3
LAW 3103	Business and Commercial Law	3
INT 2156	Business Internship 1	6
INT 3156	Business Internship 2	6

Tourism Management Core Courses		
Required Credits: 30		
TRM 2003	Introduction to Tourism	3
TRM 2103	Consumer Behaviour in Tourism	3
TRM 3003	Tourism Operations and Analytics	3
TRM 3013	Integrated Technologies for Tourism	3
TRM 3103	Sustainable Tourism	3
TRM 3113	Tourism Human Resource Management	3
TRM 4003	Economics of Tourism	3
FIN 4003	Entrepreneurial Finance	3
TRM 4103	Strategic Management in Tourism	3
TRM 4203	Tourism Final Project	3

Operations Concentration		
Required Credits: 15		
TRM 4033	Special Interest Tourism	3
TRM 4133	Event Management for Tourism	3
TRM 4113	Heritage and Cultural Tourism	3
TRM 4123	Visitor Attraction Management	3
TRM 4023	Tourism Marketing	3

Tourism Management Elective Courses		
Required Credits: 15		
TRM 4033	Special Interest Tourism	3
TRM 4103	Event Management for Tourism	3
TRM 4113	Heritage and Cultural Tourism	3
TRM 4123	Visitor Attraction Management	3
TRM 4023	Tourism Marketing	3

General Studies		
Required Credits: 33		
English, Arabic or other Languages		15
Humanities or Art		3
Information Technology or Mathematics		3
The Natural Sciences		3
The Social or Behavioural Sciences		9

<i>Total Required Credits</i>	<i>132</i>
<i>Maximum Duration of Study</i>	<i>6</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4</i>
<i>Program Code</i>	<i>BUTRM</i>
<i>Major Code</i>	<i>TRM</i>

Recommended Sequence of Study

Bachelor of Tourism Management

Course Code	Course Title	Course Credits
Year 1 Semester 1		
Required Credits: 15		
ACC 1003	Financial Accounting	3
ECO 1003	Microeconomics	3
MGT 1003	Principles of Management	3
LSM 1003	Applied Mathematics (GS)	3
LSS 1003	Life and Study Skills (GS)	3

Year 2 Semester 3		
Required Credits: 15		
TRM 2003	Introduction to Tourism	3
FIN 2003	Financial Management	3
STS 2003	Business Statistics	3
AES 1013	Arabic Communication (GS)	3
LSC 2103	Academic Reading and Writing II (GS)	3

Year 2 Summer Semester		
Required Credits: 6		
INT 2151	Business Internship 1	6

Year 3 Semester 5		
Required Credits: 15		
TRM 3003	Tourism Operations and Analytics	3
TRM 3013	Integrated Technologies for Tourism	3
BIS 3003	Business Information Systems	3
MGT 3003	Business Ethics and Corporate Governance	3
LSN 1113	Intro to Sustainability (GS)	3

Year 3 Summer Semester		
Required Credits: 6		
INT 3151	Business Internship 2	6

Higher Diploma in Tourism Management Exit

Year 4 Semester 7		
Required Credits: 15		
TRM 4003	Economics of Tourism	3
FIN 4003	Entrepreneurial Finance	3
	Elective	3
	Elective	3
AES 3003	Professional Arabic (GS)	3

Course Code	Course Title	Course Credits
Year 1 Semester 2		
Required Credits: 15		
ACC 1103	Managerial Accounting	3
ECO 1103	Macroeconomics	3
MRK 1103	Principles of Marketing	3
LSS 1123	Methods of Research (GS)	3
LSC 1103	Academic Reading and Writing I (GS)	3

Year 2 Semester 4		
Required Credits: 15		
TRM 2103	Consumer Behaviour in Tourism	3
MGT 2103	Organizational Behavior	3
OPM 2103	Operations Management	3
AES 1003	Emirati Studies (GS)	3
LSC 1503	Academic Spoken Communication (GS)	3

Year 3 Semester 6		
Required Credits: 15		
TRM 3103	Sustainable Tourism	3
TRM 3113	Tourism Human Resource Management	3
LAW 3103	Business and Commercial Law	3
MGT 3103	Strategic Management and Simulation	3
LSS 2403	Innovation and Entrepreneurship (GS)	3

Year 4 Semester 8		
Required Credits: 15		
TRM 4023	Strategic Management in Tourism	3
TRM 4203	Tourism Final Project	3
	Elective	3
	Elective	3
	Elective	3

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- Eman Zabalawi**, Master of Business Administration (Total Quality Management), University of Leicester
- Emerson Cabudol**, Doctorate in Business Admin, Lyceum of The Philippines
- Emma Woods**, Masters (Intl Law and Intl Relations), University of New South Wales

- Enrico Mendoza**, Master of Business Administration (Business Administration), De la Salle University
- Fara Khermouche**, Ph.D In Middle eastern and Islamic Studies, Durham University, UK
- Fatheya Moosa Abdulla Hussain Alshamali**, Executive MBA (Business), Dubai Men's College
- Fatima Khalfan Sultan Farhan Alloghani**, Bachelor of Applied Science (Business Administration (Human Resources)), Fujairah Women's College
- Fatma Tarish Saeed Khalifa Butubair Al Mehairi**, Masters (Quality Management), University of Wollongong
- Fatmah Mahanna Saeed Mahanna Saeed Kendi**, Bachelor of Applied Science (Information Management), Fujairah Women's College
- Fatmah Mohamed Salim Al Sereidi**, Bachelor of Applied Science (Information Management), Fujairah Women's College
- Francis Amagoh**, Ph.D in Public Policy and Administration , Virginia Commonwealth University, USA
- Gabor Andradi**, Masters (Law), Eötvös Loránd University
- Gene Bryant**, Master of Science (Business Computing Science), Master of Science (Economics), Texas A&M University
- George Owusu**, Ph.D in Business Administration, Nova Southern University, USA
- Ghazanfar Malik**, Master of Business Administration (Business), Univ. of Wales, Cardiff
- Giovanna Bejjani**, Master of Commerce (Marketing), University of New South Wales
- Gouljannet Humphrey**, Master of Business Administration (Leadership & Management), Brenau University
- Habib Kassim**, Master of Business Administration, University of Western Sydney
- Hadal Hammour**, Master of Business Administration (Business Administration), American University of Beirut
- Hajer Kedher**, Ph.D in Management Sciences, University of Tunis, Tunisia
- Hajer Mohamed Hassan Morad**, Master of Science (Organizational Excellence), Hamdan Bin Mohammed E-University
- Hajer Zarrouk**, Ph.D In Economics, University of Mediterranean, France & University Tunis El Manar, Tunisia
- Hanan Alwan Zaki**, Master of Arts (Teaching), The University of Memphis
- Harbinder Singh**, Masters (Business), The University of Newcastle
- Hassnain Sadiq**, Master of Business Administration (General Management), University of Wollongong
- Haya Al Shawwa**, Ph.D (Economics), Universita' degli Studi di Ferrara
- Heather Webb**, Ph.D (Business Management), The University of Edinburgh
- Hector Iweka**, Ph.D (General Business), Capella University
- Hernani Manalo**, Ph.D (Business Management), Univ Negros Occidental-Recoleta
- Herveen Singh**, PhD., University of Toronto
- Hessa Mubarak Saeed Hamad Al Shamisi**, Bachelor of Applied Science (Business Administration - General), Al Ain Women's College
- Huda Eyad Mohamed Basadiq Al Hadhrami**, Bachelor of Applied Science (eBusiness Management), Sharjah Women's College
- Husam Omar**, Ph.D (International Education), University of Incarnate Word
- Husam Shahroor**, Ph.D in Accounting, Amman Arab University, Jordan
- Hussain Ali Hayder Mohamed Alshaiikh Jaafar Alnumairy**, Master of (Criminology & Criminal Justice), Griffith University
- Iman El Meniawy**, Master of Business Administration (Business Administration), University of Saskatchewan
- Indrani Hazarika**, Doctorate in Philosophy (Accounting), Gauhati University
- Inoussa Bouchacar**, Ph.D in Economics, University of Nebraska, USA
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- Jacinta DSilva**, Master of Business Administration (Business Administration), Karnataka State Open Univ
- Jacobus Nel**, Ph.D (Commerce), University of South Africa
- Jainambu Abbas**, Master of Philosophy (Commerce), Masters (Finance), University of Madras
- Jaishree Asarpota**, Master of Business Administration (Business Administration), Heriot-Watt University
- James Banks**, Master of Business Administration (Management), Univ. of Calif. - Los Angeles
- James Harris**, Ph.D in Business Administration, Grenoble Ecole de Management, France
- Jamila Al Shehhi**, Executive MBA (Strategic Management), Ras Al Khaimah Women's College
- Jane Bourne**, Master of Law (Commercial & Corporate Law), University College of London
- Jaweed Malik**, Master of Science (Business Info. Technology), University of Northumbria
- Jennie Lavin**, Master of Business Administration (Business Management), The University of Warwick
- Johannes De Klerk**, Ph.D (Business Administration), Swiss Management Center
- John McKeown**, Master of Business Administration (E-Commerce), The University of Kent
- Jones Kasonso**, Ph.D, Northcentral University, USA
- Julian Barona Motlak**, Masters (Finance), Masters (Logistics Engineering), Korea Maritime University
- Kalpna Solanki**, Ph.D (Management), Banasthali Vidyapith
- Kavita Shah**, Ph.D (Management), JJ Tibrewala University
- Kentaya Beeler**, Ph.D In Accounting, Capella University, USA
- Kian Tan**, Master of Commerce (Advanced Info Systems & Mgt), University of New South Wales
- Kim Glover**, Master of Business Administration (Management), University of Keele
- Kristian Gotthelf**, Masters (International Marketing), Syddansk University
- Kwame Owusu**, Ph.D in Business Administration, Jackson State University, USA
- Lakmee Senadheera**, Master of Business Administration (Human Resource Management), Charles Sturt University
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- Leila Rodemann**, Master of Arts (Economics), Clemson University
- Linah Bseiso**, Master of Business Administration (Management), Amberton University
- Linda Daniel**, Ph.D (Banking), Alagappa University
- Luan Eshtrefi**, Masters(European Union Economics), South East European University, Macedonia
- Lukman Olorogun**, Ph.D, International Islamic University< Malaysia
- Malini Nair**, Master of Business Administration (Business Administration), Birla Institute of Tech & Sc.
- Mamie Griffin**, Ph.D (Human Resource Management), Univ of Southern Mississippi
- Manal Abdel Wahed**, MA International Business, University of Wollongong
- Manal Ibrahim Asad Al Haj Ali**, MBA in Banking & Finance, Institute of Banking Studies & University of Jordan
- Manishankar Chakraborty**, Phd., Nagpur University
- Mansoor Khwaja**, Ph.D (Commerce & Management Studies), Andhra University
- Manuel Vertiz Mou**, Master's Degree in Public Relations and Press Office Management, Universitat Autònoma de Barcelona
- Maree Murphy**, Master of Business Administration (Business Administration), Heriot-Watt University
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Mario Gabrael, Master of Business Administration (Human Resource Management), University of Western Sydney

Mary Precy Lego, Masters (Business Administration), University of San Agustin

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Meera Albeshr, Bachelor of Science (Finance), Zayed University

Melanie Bowman, Master of Business Administration (Business Administration), University of Canberra

Merwyn strate, Ph.D, University of Nebraska, USA

Michael Grantham, Master of Business Administration (Marketing), Griffith University

Michael Lewicki, Master of Business Administration (Agricultural Economics), University of Guelph

Michael Westlund, Master of Business Administration (International Management), Thunderbird Sch.of Global Mgmt.

Mohamad Al Sakka, Ph.D (eBusiness Policy Development), De Montfort University

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Mohammad Quasem, Master of Business Administration (Business Administration), The University of Strathclyde

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Nadia BenSedrine Goucha, Ph.D, University of Paris 1 Pantheon-Sorbonne France

Nahla Al Ali, Executive MBA (Strategic Management), Ras Al Khaimah Women's College

Nancy Hankir, Ph.D (Management), Swiss Management Center

Naomi Keir, Master of Philosophy (Adult Education), University of Glasgow

Nathan Kawansson, Master of Science (Engineering), Technical University Denmark

Naveen Seth, Ph.D in Economics and International Business, New York University, USA

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Ng Poh Yen, Ph.D (Management), University of Canterbury

Nickie Christensen, Master of Business Administration (Management), Master of Science (TESOL), University of Pennsylvania

Niki Dancy, Masters in Quality Management, University of Wollongong

Nikola Perovic, Ph.D (Economics Science), University of Montenegro

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Omar Badran, Master of Business Administration (General Business Admin), The University of Hull

Onise Alpenidze, Ph.D in Business Administration, Tbilisi State University, Georgia

Pamela Hawkswell, Master of Science (Training & Performance Mgt.), Univ of Southern Queensland

Panagiotis Thomas, Ph.D (Professional Studies), Middlesex University

Pauline Holt, Master of Business Administration (Business Administration), Aston University

Pedro Coelho, MA in International Business, Vilnius University

Peter John Lean, Master of Business, The University of Newcastle

Peter Muturi Kimani, Master of Business Administration (Accounting & Finance), Master of Arts (Leadership & Management), University of East London

Philip Almond, Master of Business Administration (Public Administration), University of Birmingham

Philip Brear, Master of Law, University of Northumbria

Philip Large, Master of Business Administration (Executive MBA), RMIT University

Pranav Naithani, Ph.D (Management), Birla Institute of Tech & Sc.

Priyadarshini Baguant, Ph.D, University of Mauritius, Mauritius

Przemyslaw Stach, Masters (American Business Culture & Marketing), University of Economics, Krakow, Poland

Rachna Banerjee, Ph.D (Commerce), SNDT Women's University

Randa El Chaar, Masters, American University of Beirut

Randy Canaday, Master of Business Administration (Business Administration), University of Phoenix

Rasha Abou Samra, Masters (Business Administration), Master of Philosophy (Business), Maastricht School of Management

Rashid Ashraf, Masters (Human Resource Management), Masters (Marketing), The University of Bolton

Rashid Saber, Ph.D (Business Administration), California Coast University

Raymond Cox, Master of Business Administration (Business), University of KwaZulu-Natal

Raji Nair, Ph.D (Economics), University of Kerala

Renata Hodgson, Ph.D (Business), University of Western Sydney

Reshma John, Master of Business Administration (Business Administration), University Of Calicut

Ricardo Archbold, Ph.D in Business Administration, Nova Southeastern University, USA

Richard Croome, Ph.D (Business Management), Univ of the Sunshine Coast

Rima Baki, Master of Business Administration (Marketing), University of Leicester

Robert Ritchie, Doctor of Jurisprudence Degree, Temple University School of Law, Philadelphia

Roberta Fenech, Ph.D (Psychology), University of London

Robson Chiambiro, Master of Business Administration (Business Administration), Nelson Mandela Metropolitan University

Rola Noun, Master of Business Administration (Marketing), University of Leicester

Rory Mc Connon, Master of Business Administration (Business Administration), University of Ulster

Rosalind Rice, Masters of Distance Education (Education), University of Southern Queensland

Ross Smith, Mast of Applied Finance (Finance), Master of Business Administration (Business Administration), Macquarie University

Roudaina Houjeir, Doctorate in Marketing, University of Westminster

Saad Laraqui, Ph.D in Management, Rutgers University, USA

Sabir Malik, Master of Business Administration (Innovative Management), Coventry University

Sadaf Tauqir, Masters (Business Economics), Master of Science (Management), University of the Punjab

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Salman Ahmad, Master of Science (Operational Research), University of Strathclyde

Samah Khalil, Ph.D (Integrated Textile & Apparel Science), Auburn University

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Sergiy Spivakovskyy, Ph.D (Business Marketing), European University

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Shahira Abdel-Hameid, Ph.D, University of Manchester, UK

Shahira El Alfy, Doctorate of Business Administration, Arab Academy for Science and Technology and Maritime

Shaima'a Al Hijawi, Master of Business Administration (Management Information System), Arab Academy for Sci & Tech

Shane McKenna, Master of Business Administration (Human Resource Management), Master of Education (TESOL), University of New England

Shaun Hodgson, Master of Business (Operation Management), University of Western Sydney

Shazia Shah, Master of Business Administration (International Banking & Finance), University of Birmingham

Shibeshi Khasay, Doctorate in Philosophy, McGill University

Shifana Rashad, Master of Management (International Business), Massey University

Shiladitya Verma, MA Psychology (Psychology), Master of Philosophy (Management), Master of Arts, Masters (Management Science), Dr. C.V. Raman University

Shirley Leopereira, Ph.D (Applied Business), Dr. Bhim Rao Ambedkar University

Sitalakshmi Ramanan, Doctorate in Philosophy (Management), Devi Ahliya Vishwavidyalaya

Soha El Mokdad, Masters (Accounting & Finance), St. Joseph's University

Sonia Abdennadher, Ph.D in Business Administration, University of Paris Sud 11, France

Sriya Chakravarti, Ph.D in Education (Organization And Leadership), University of San Francisco

Suhair Alwahabi, Master of Education, The University of Adelaide

Suresh Shanmuga Sundaram, Master of Business Administration (Business Administration), University of Madras

Susan Busby, Ph.D (Business Administration), Swiss Management Center

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Tamilselvan Mahalingam, Master of Business Administration (Business Administration), University of Madras

Tamir Mohamed, Master of Commerce, University of Wollongong

Tarek Ben Noamene, Ph.D, University of Nice, France

Tasneem Shaikh, Masters (Global Human Resource Mngt), Masters (Commerce), The University of Liverpool

Tiffanie Deloach, Ph.D, Capella University, USA

Timothy Wilkins, Masters (Hospitality Management), University of Houston

Tridib Chatterji, Master of Science (International Administration), School for Intl. Training

Venkata Kharidehal, Master of Business Administration (Management), Master of Management (Management), Birla Institute of Tech & Sc.

Veselina Yankova, Ph.D in Organization and Management , Technical University of Varna

Viatcheslav Liachenko, Master of Science (Management), Milano Graduate School of Mang

Vincent Hassan, Master of Management, Massey University

Wafa Hassan Ali Qambar Al Mulla, Bachelor of Applied Science (Business Adm - Hum Resources), Dubai Women's College

Wasif Minhas, MA in Teaching (Education), University of London

William Hickey, Ph.D, Pennsylvania State University, USA

Yolande Smit, Ph.D (Internal Auditing), Cape Peninsula University of Technology

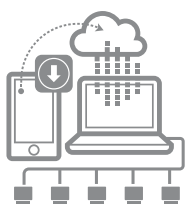
Yousuf Khan, PhD Corporate Governance and Accounting, London South Bank University

Yusuf Nulla, Ph.D in Business Administration, Universidad Azteca, Mexico

Zafer Bukey, Masters in Engineering (Oper. Resch. & Mgt. Info. Sys.), University of Toronto

Zaheer Abbas, Ph.D (Finance), Mohammad Ali Jinnah University

Zainab Atta, Master of Business Administration (Financial Management), The University of Hull



COMPUTER INFORMATION SCIENCE DIVISION



Computer Information Science Division

Divisional Mission

The mission of the Computer Information Science (CIS) Division is to provide future-focused programs to prepare students for the dynamic information systems and technology sectors of the UAE. CIS graduates are 'T-shaped professionals' with industry-ready technical and managerial skills.

All HCT CIS program are continually monitored and reviewed to ensure that the skills students acquire in the classroom, and the resources they use, are at the cutting edge of technology and are industry appropriate. As a result, the HCT CIS graduates are in high demand from leading industry employers looking for talented people who have the technical, communication and team-working skills needed to enhance their businesses.

This exciting field provides excellent career prospects for graduates in the fields of education, government, private enterprise, internet development, database engineering, programming and other areas within the steadily growing communications industry.

Senior Staff

Executive Dean: **Dr. Hamad Odhabi**

Associate Dean: **Dr. Nasser Nassiri**

Degrees	Offered at
Bachelor of Information Systems (Business Solutions)	Al Ain Women's; Abu Dhabi Men's; Abu Dhabi Women's; Dubai Women's; Khalifa City Women's; Madinat Zayed Women's; Ras Al Khaimah Women's; Ruwais Men's.
Bachelor of Information Technology (Applications Development)	Abu Dhabi Men's; Abu Dhabi Women's; Dubai Men's; Dubai Women's; Ras Al Khaimah Women's; Sharjah Women's
Bachelor of Information Technology (Interactive Multimedia Technologies)	Al Ain Women's; Abu Dhabi Women's; Khalifa City Women's; Ras Al Khaimah Women's
Bachelor of Information Technology (Networking)	Al Ain Men's; Dubai Men's; Dubai Women's; Fujairah Men's; Ras Al Khaimah Men's; Ras Al Khaimah Women's; Sharjah Men's; Sharjah Women's
Bachelor of Information Technology (Security and Forensics)	Al Ain Men's; Al Ain Women's; Abu Dhabi Men's; Abu Dhabi Women's; Dubai Men's; Ras Al Khaimah Men's; Ras Al Khaimah Women's; Sharjah Men's; Sharjah Women's

Bachelor of Information Systems

Admission to Program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The mission of the Bachelor of Information Systems is to produce graduates who can successfully align information technology and business processes to address organizational needs. The graduates should be equipped with core Information technology and information systems skills, knowledge, and work competencies to create, implement, and manage IT solutions in response to business challenges and requirements. The program aims to prepare graduates for direct entry into positions related to the management of information systems within organizations.

In addition to theoretical and technical skills, the program prepares students to adapt to complex and evolving technological environments such as those observed in the workplace, apply ethical standards, and use various communication approaches in their interactions with others.

Program Description

The Bachelor of Information Systems program prepares students to apply ethical values to complex and unpredictable problems and to plan, design, implement, evaluate, and manage an organization's ICT infrastructure.

The program provides students with the required knowledge, skills, and competencies in the areas of information technology assets, archival, and information processing systems. Throughout the program, students learn to apply fundamental concepts and skills from a variety of information technologies and develop an understanding of the role of information systems within organizations.

Students also develop professional work competencies to complement their technical skills and apply high level special administrative responsibilities including leading multiple and complex groups. Within each concentration, students learn to apply current and advanced techniques, skills, and tools; analyze organizations and user needs; create and evaluate computer-based solutions, and implement information systems solutions in a given organizational environment.

The program offers a concentration in:

- Business Solutions.

Students have the option to exit the program with a Higher

Diploma degree after completion of the third year (see Completion Requirements below).

Program Goals

The goals of the Bachelor of Information Systems - Business Solutions program are to

- Produce graduates who can successfully align information technology and business processes to address organizational needs.
- Develop student knowledge and skills to create, implement, and manage IT solutions in response to business challenges and requirements.
- Prepare graduates for direct entry into positions related to the management of information systems within organizations.
- Prepare graduates who can adapt and evolve in complex technological environments such as those found in the workplace and accept social responsibility at large.
- Produce graduates who contribute to and observe ethical standards and use various communication approaches in their interactions with others.

Program Learning Outcomes

Common for Bachelor of Information Systems and Higher Diploma Exit Option

Graduates will be able to:

- Apply knowledge of computing and mathematics appropriate to the discipline
- Analyze a problem, and identify and define the computing requirements appropriate to its solution.
- Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- Function effectively on teams to accomplish a common goal
- Understand professional, ethical, legal, security and social issues and responsibilities
- Communicate effectively with a range of audiences
- Analyze the local and global impact of computing on individuals, organizations, and society
- Recognize the need for and an engage in continuing professional development
- Use current techniques, skills, and tools necessary for computing practice.

In addition, the final year concentration has its specific program learning outcomes.

Business Solutions Concentration

Graduates will be able to:

- Exhibit a critical awareness of a range of relevant principles and theoretical knowledge to develop strategies and solutions to business problems.
- Demonstrate a critical awareness of the core functions of business administration (including management, accounting, human resources, and finance).
- Employ analytical skills to formulate business solutions in order to manage and maintain organizations' information system effectively.
- Determine e-business strategies and infrastructure requirements for an organization to develop e-business applications

- Business Solutions Concentration Courses: 36 credits
- 4000 Elective Courses: 6 credits
- General Studies: 33 credits

Higher Diploma in Information Systems Exit Option

Completion Requirement

Students must successfully complete a minimum of 105 credits, including:

- Information Systems Core Courses: 48 credits including both internships
- Business Solutions Concentration Courses: 27 credits
- General Studies: 30 credits

Completion Requirements

Bachelor of Information Systems

Students must successfully complete a minimum of 135 credits, including:

- Information Systems Core Courses: 60 credits

Information Systems Core Courses			Course Credits
Required Credits: 60			
CIS 1003	Information Systems in Organisations and Society	3	
CIS 1103	Hardware and Networking	3	
CIS 1203	Web Technologies	3	
CIS 1303	Data and Information Management	3	
CIS 1403	Fundamentals of Programming	3	
CIS 2003	Statistics and Probability	3	
CIS 2103	Principles of Information Assurance, Security and Privacy	3	
CIS 2203	Applied Discrete Maths	3	
CIS 2303	Systems Analysis and Design	3	
CIS 2403	Object Oriented Programming	3	
CIS 2806	Work Related Experience I	6	
CIS 2903	Operating Systems	3	
CIS 3203	Enterprise Architecture	3	
CIS 3806	Work Related Experience II	6	
CIS 4203	Information Technology Strategy and Governance	3	
CIS 4603	Project Management	3	
CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6	
4000 Elective Courses			Course Credits
Required Credits: 6			
CIA 4613	Mobile Application Administration	3	
CIM 4103	Web Authoring and Administration	3	
CIS 4403	Cloud Computing	3	
CSF 4003	Security and Risk Management	3	

Business Solutions Concentration Courses			Course Credits
Required Credits: 36			
CIB 2003	Technology Based Marketing	3	
CIB 3003	Human Resource Management and Systems	3	
CIB 3013	Data Analytics	3	
CIB 3103	Object Oriented Analysis & Design	3	
CIB 3113	Business Finance	3	
CIB 3123	Big Data Technology	3	
CIB 3203	Accounting For Managers	3	
CIB 3303	E-Business Principles	3	
CIB 3403	Advanced Database Technologies	3	
CIB 4003	E Business Applications Development	3	
CIB 4203	Customer Relationship Management Systems	3	
CIB 4603	Enterprise Resource Planning	3	
General Studies			
Required Credits: 33			
English, Arabic or other Languages			15
Humanities or Art			3
Information Technology or Mathematics			3
The Natural Sciences			3
The Social or Behavioural Sciences			9

Recommended Sequence of Study

Bachelor of Information Systems (Business Solutions)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
CIS 1003	IS in Organization and Society	3	CIS 1303	Data and Information Management	3
CIS 1103	Hardware and Networking	3	CIS 1403	Fundamentals of Programming	3
CIS 1203	Web Technologies	3	LSC 1503	Academic Spoken Communication	3
LSC 1103	Academic Reading and Writing I	3	AES 1013	Arabic Communications I	3
LSS 1003	Life and Study Skills	3	LSM 1003	Applied Mathematics	3
Year 1 Summer Semester*			Year 2 Semester 4		
Required Credits:			Required Credits: 15		
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 15			Required Credits: 15		
CIS 2203	Applied Discrete Math	3	CIS 2003	Statistics and Probability	3
CIS 2403	Object Oriented Programming	3	CIS 2303	Systems Analysis and Design	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIB 2003	Technology Based Marketing	3
CIS 2903	Operating Systems	3	CIB 3203	Accounting For Managers	3
LSC 2103	Academic Reading and Writing II	3	AES 1003	Emirati Studies	3
Year 2 Summer Semester*			Year 3 Semester 6		
Required Credits: 6			Required Credits: 18		
CIS 2806	Work Related Experience	6	LSS 2403	Innovation and Entrepreneurship	3
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 15			Required Credits: 18		
CIS 3203	Enterprise Architecture	3	CIB 3103	Object Oriented Analysis & Design	3
CIB 3013	Data Analytics	3	CIB 3303	E-Business Principles	3
LSS 1123	Basic Method of Scientific Research and Development	3	CIB 3113	Business Finance	3
LSN 2433	Ecology	3	CIB 3403	Advanced Database Technologies	3
CIB 3003	HR Management and Systems	3	CIB 3123	Big Data Technology	3
Year 3 Summer Semester*			Year 4 Semester 7		
Required Credits: 6			Required Credits: 15		
CIS 3806	Work Related Experience	6	AES 3003	Professional Arabic	3
Higher Diploma in Information Systems Exit Option			CIB 4003		
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
AES 3003	Professional Arabic	3	CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6
CIB 4003	E Business Applications Development	3		Elective	3
	Elective	3	CIB 4203	Customer Relationship Management Systems	3
CIB-4603	Enterprise Resource Planning	3	CIS 4203	Information Technology Strategy and Governance	3
CIS 4603	Project Management	3			

* Additional courses may be offered in each Summer Semester at the discretion of the academic division.

Bachelor of Information Technology

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The mission of the Bachelor of Information Technology is to develop graduates with Information technology skills and knowledge, and work competencies required to create cutting-edge IT solutions to meet the work environment. The program aims to prepare graduates to be able to work as IT specialist in one of the 4 currently offered concentration. The concentrations are Application Development, Security and Forensics, Interactive Multimedia Technologies and Networking.

In addition to theoretical and technical skills, the program prepares students to adapt to complex and evolving technological environments such as those observed in the workplace, apply ethical standards, and use various communication approaches in their interactions with others.

Program Description

The Bachelor of Information Technology program prepares students to respond to the needs of the workforce for knowledgeable and skilled IT professionals who can apply ethical values to complex and unpredictable problems and to plan, design, implement, evaluate and manage IT solutions.

The program provides students with the broad technical education necessary for employment in the public or private sector, and it enables them to develop an understanding of fundamentals and current issues important for future development. Students also develop professional work competencies to complement their technical skills and apply high-level special administrative responsibilities.

The program is structured as a set of core, elective, general studies, and concentration courses. In the core courses, students will acquire the core knowledge, skills, and competencies needed for IT. Through the concentration courses, students will develop up-to-date knowledge and skills, in this fast-growing field to meet the industry requirement.

The program offers four concentrations:

Application Development

Interactive Multimedia Technologies

Networking

Security and Forensics

Students have the option to exit the program with a Higher Diploma degree after completion of the third year (see Completion Requirements below).

Program Goals

Applications Development Concentration - Goals

- Produce graduates with the development skills required to create cutting-edge software applications and apps on multiple platforms.
- Offer graduates with the required knowledge and skills in current software development methodologies using state-of-the-art tools and facilities.
- Prepare graduates to be able to work as software engineers, enterprise system developers, system architects, project managers, and mobile application developers.
- Prepare graduates who can adapt and evolve in complex technological environments such as those found in the workplace and accept social responsibility at large.
- Produce graduates who contribute to and observe ethical standards and use various communication approaches in their interactions with others.

Interactive Multimedia Technologies Concentration - Goals

- Produce graduates with professional skills built on a sound foundation in the fields of interactivity and multimedia powered by information technology.
- Prepare graduates to become leaders and innovators in a new and interactive society based on interactive arts, multimedia, web and interface design, game design, and development.
- Prepare graduates to work as 2d and 3d graphic artists, animation experts, interactive multimedia developers, game designers and developers, and simulation specialists.
- Prepare graduates who can adapt and evolve in complex technological environments such as those found in the workplace and accept social responsibility at large.
- Produce graduates who contribute to and observe ethical standards and use various communication approaches in their interactions with others.

Networking Concentration - Goals

- Produce graduates who can design, configure, implement, and troubleshoot converged campus and enterprise networks.
- Provide graduates with the required knowledge and skills to work at multiple levels of local and enterprise networks.
- Produce graduates who will be able to work as network engineers, network architects, infrastructure designers, project managers, and consultants.
- Prepare graduates who can adapt and evolve in complex technological environments such as those found in the workplace and accept social responsibility at large.
- Produce graduates who contribute to and observe ethical standards and use various communication approaches in their interactions with others.

Security and Forensics Concentration - Goals

- Produce graduates with skills and a strong foundation in the field of information security.
- Provide graduates with technical and managerial skills for assessing risk, securing information assets, identifying and responding to attacks, conducting a forensic investigation, and recovering from incidents and disasters.
- Prepare graduates to work as requirement security specialists; security practitioners, managers, and consultants; forensic investigators; and IT auditors.
- Prepare graduates who can adapt and evolve in complex technological environments such as those found in the workplace and accept social responsibility at large.
- Produce graduates who contribute to and observe ethical standards and use various communication approaches in their interactions with others.

Program Learning Outcomes**Common for Bachelor of Information Technology and Higher Diploma Exit Option**

Graduates will be able to:

- Apply knowledge of computing and mathematics appropriate to the discipline
- Analyze a problem, and identify and define the computing requirements appropriate to its solution.
- Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- Function effectively on teams to accomplish a common goal
- Understand professional, ethical, legal, security and social issues and responsibilities
- Communicate effectively with a range of audiences
- Analyze the local and global impact of computing on individuals, organizations, and society
- Recognize the need for and engage in continuing professional development
- Use current techniques, skills, and tools necessary for

computing practice.

In addition, each final year concentration has its specific program learning outcomes.

Applications Development Concentration

Graduates will be able to:

- Demonstrate a critical awareness of a range of analysis, design and programming methods to solve complex business problems
- Develop secure desktop, web and mobile applications for multiple platforms using client-side and server side coding, and advanced database techniques
- Deploy applications for mobile devices using industry standard tools and practices for design, development and testing.

Interactive Multimedia Technologies Concentration

Graduates will be able to:

- Demonstrate a solid understanding of Interactive Multimedia Design principles.
- Employ technical skills proficiency with industry-standard tools to produce interactive multimedia products
- Apply industry best practices and techniques for planning, designing and producing interactive multimedia products

Networking Concentration

Graduates will be able to:

- Explain concepts and theories of networking and apply them to various situations, classifying networks, analyzing performance, troubleshooting and implementing new technologies.
- Design network infrastructure by selecting appropriate devices, topologies, protocols, systems software, network services and security.
- Develop solutions for networking and security problems, balancing business concerns, technical issues and security

Security and Forensics Concentration

Graduates will be able to:

- Critically consider relevant principles and theoretical knowledge to assess risk and develop policies and procedures to secure an organizational information system.
- Demonstrate the ability to identify security weaknesses using intrusion detection techniques and take corrective actions to secure information assets.
- Employ advanced skills to conduct forensic investigations in line with local and international law and standards.
- Deploy and manage secured client and server operating systems.

Bachelor of Information Technology - Concentrations

The program offers four concentrations:

- **Application Development**
- **Interactive Multimedia Technologies**
- **Networking**
- **Security and Forensics**

Completion Requirements and Recommended Sequence of Study

Bachelor of Information Technology

Students must successfully complete a minimum of 135 credits, including:

- Information Systems Core Courses: 60 credits
- Concentration Courses: 36 credits
- 4000 Elective Courses: 6 credits
- General Studies: 33 credits

Higher Diploma in Information Technology Exit Option

Completion Requirements

Students must successfully complete a minimum of 105 credits, including:

- Information Systems Core Courses: 48 credits including both internships
- Concentration Courses: 27 credits
- General Studies: 30 credits

Concentration

Bachelor of Information Technology (Applications Development)

Course Credits			Course Credits		
Information Technology Core Courses			Applications Development Concentration Courses		
Required Credits: 60			Required Credits: 36		
CIS 1003	Information Systems in Organisations and Society	3	CIA 2503	Web Applications Development	3
CIS 1103	Hardware and Networking	3	CIA 2513	Key Components of IoT Architecture for Smart Applications	3
CIS 1203	Web Technologies	3	CIA 3003	Introduction to Mobile Applications	3
CIS 1303	Data and Information Management	3	CIA 3103	Database Design and Administration	3
CIS 1403	Fundamentals of Programming	3	CIA 3113	IoT and Security	3
CIS 2003	Statistics and Probability	3	CIA 3123	Mobile Game Development	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIA 3133	Advanced Application Development	3
CIS 2203	Applied Discrete Maths	3	CIA 4003	Advanced Mobile Applications	3
CIS 2303	Systems Analysis and Design	3	CIA 4103	Data Driven Web Technologies	3
CIS 2403	Object Oriented Programming	3	CIA 4203	Enterprise Database Applications	3
CIS 2806	Work Related Experience I	6	CIA 4503	Advanced Object Oriented Programming	3
CIS 2903	Operating Systems	3	CIB 3103	Object Oriented Analysis & Design	3
CIS 3003	Human Computer Interaction	3			
CIS 3303	System Architecture and Integration	3			
CIS 3806	Work Related Experience II	6			
CIS 4603	Project Management	3			
CIS 4906	Capstone Project (Integrative & Consultancy Focused)				
General Studies			4000 Elective Courses		
Required Credits: 33			Required Credits: 6		
English, Arabic or other Languages		15	CIB 4203	Customer Relationship Management Systems	3
Humanities or Art		3	CIB 4603	Enterprise Resource Planning	3
Information Technology or Mathematics		3	CIM 4103	Web Authoring and Administration	3
The Natural Sciences		3	CIS 4403	Cloud Computing	3
The Social or Behavioural Sciences		9	CSF 4103	Web Application and E-Commerce Security	3

Recommended Sequence of Study

Bachelor of Information Technology (Applications Development)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
CIS 1003	IS in Organization and Society	3	CIS 1303	Data and Information Management	3
CIS 1103	Hardware and Networking	3	CIS 1403	Fundamentals of Programming	3
CIS 1203	Web Technologies	3	LSC 1503	Academic Spoken Communication	3
LSC 1103	Academic Reading and Writing I	3	AES 1013	Arabic Communications I	3
LSS 1003	Life and Study Skills	3	LSM 1003	Applied Mathematics	3
Year 1 Summer Semester*					
Required Credits:					
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 15			Required Credits: 15		
CIS 2203	Applied Discrete Math	3	CIS 2003	Statistics and Probability	3
CIS 2403	Object Oriented Programming	3	CIS 2303	Systems Analysis and Design	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIA 2503	Web Application Development	3
CIS 2903	Operating Systems	3	CIA 2513	Key Components of IoT Architecture for Smart Applications	3
LSC 2103	Academic Reading and Writing II	3	AES 1003	Emirati Studies	3
Year 2 Summer Semester*					
Required Credits: 6					
CIS 2806	Work Related Experience	6			
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 15			Required Credits: 18		
CIS 3303	System Architecture and Integration	3	LSS 2403	Innovation and Entrepreneurship	3
CIS 3003	Human Computer Interaction	3	CIA 3113	IoT and Security	3
CIA 3123	Mobile Game Development	3	CIA 3133	Advanced App Development	3
LSS 1123	Basic Method of Scientific Research and Development	3	CIA 3003	Introduction to Mobile Applications	3
LSN 2433	Ecology	3	CIB 3103	Object Oriented Analysis & Design	3
			CIA 3103	Database Design and Administration	3
Year 3 Summer Semester*					
Required Credits: 6					
CIS 3806	Work Related Experience	6			
Higher Diploma in Information Technology Exit Option					
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
CIA 4103	Data Driven Web Technologies	3	CIA 4503	Advanced Object Oriented Programming	3
CIA 4203	Enterprise Database Applications	3	CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6
	Elective	3		Elective	3
CIS 4603	Project Management	3	CIA 4003	Advanced Mobile Applications	3
AES 3003	Professional Arabic	3			

* Additional courses may be offered in each Summer Semester at the discretion of the academic division

Concentration

Bachelor of Information Technology (Interactive Multimedia Technologies)

Course Credits			Course Credits		
Information Technology Core Courses			Interactive Multimedia Concentration Courses		
Required Credits: 60			Required Credits: 36		
CIS 1003	Information Systems in Organisations and Society	3	CIA 2503	Web Applications Development	3
CIS 1103	Hardware and Networking	3	CIM 2003	Graphic Design for Multimedia	3
CIS 1203	Web Technologies	3	CIM 2103	Storyboarding for Multimedia	3
CIS 1303	Data and Information Management	3	CIM 3003	2D Animation	3
CIS 1403	Fundamentals of Programming	3	CIM 3113	Motion Graphics	3
CIS 2003	Statistics and Probability	3	CIM 3203	Programming for Multimedia	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIM 3403	3D Modelling and Animation	3
CIS 2203	Applied Discrete Maths	3	CIM 3503	Computer Game Design and Development	3
CIS 2303	Systems Analysis and Design	3	CIM 4003	Multimedia Scripting	3
CIS 2403	Object Oriented Programming	3	CIM 4103	Web Authoring and Administration	3
CIS 2806	Work Related Experience I	6	CIM 4203	Virtual Reality and Simulation	3
CIS 2903	Operating Systems	3	CIM 4303	VFX, Audio, Editing and Composition	3
CIS 3003	Human Computer Interaction	3	General Studies		
CIS 3303	System Architecture and Integration	3	Required Credits: 33		
CIS 3806	Work Related Experience II	6	English, Arabic or other Languages		15
CIS 4603	Project Management	3	Humanities or Art		3
CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6	Information Technology or Mathematics		3
Course Credits			The Natural Sciences		3
4000 Elective Courses			The Social or Behavioural Sciences		9
Required Credits: 6					
CIA 4503	Advanced Object Oriented Programming	3			
CIB 4203	Customer Relationship Management Systems	3			
CIB 4603	Enterprise Resource Planning	3			
CIS 4403	Cloud Computing	3			

Recommended Sequence of Study

Bachelor of Information Technology (Interactive Multimedia Technologies)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
CIS 1003	IS in Organization and Society	3	CIS 1303	Data and Information Management	3
CIS 1103	Hardware and Networking	3	CIS 1403	Fundamentals of Programming	3
CIS 1203	Web Technologies	3	LSC 1503	Academic Spoken Communication	3
LSC 1103	Academic Reading and Writing I	3	AES 1013	Arabic Communications I	3
LSS 1003	Life and Study Skills	3	LSM 1003	Applied Mathematics	3
Year 1 Summer Semester*			Year 2 Semester 4		
Required Credits:			Required Credits: 15		
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 15			Required Credits: 15		
CIS 2203	Applied Discrete Math	3	CIS 2003	Statistics and Probability	3
CIS 2403	Object Oriented Programming	3	CIS 2303	Systems Analysis and Design	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIM 2003	Graphic Design for Multimedia	3
CIS 2903	Operating Systems	3	CIM 2103	Storyboarding for Multimedia	3
LSC 2103	Academic Reading and Writing II	3	AES 1003	Emirati Studies	3
Year 2 Summer Semester*			Year 3 Semester 6		
Required Credits: 6			Required Credits: 18		
CIS 2806	Work Related Experience	6	CIS 3303	System Architecture and Integration	3
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 15			Required Credits: 18		
CIA 2503	Web Applications Development	3	CIS 3003	Human Computer Interaction	3
CIM 3403	3D Modelling and Animation	3	CIM 3003	2D Animation	3
CIM 3113	Motion Graphics	3	LSS 1123	Basic Method of Scientific Research and Development	3
CIM 3203	Programming for Multimedia	3	LSN 2433	Ecology	3
LSS 2403	Innovation and Entrepreneurship	3	CIM 3503	Computer Game Design and Development	3
Year 3 Summer Semester*			Year 4 Semester 8		
Required Credits: 6			Required Credits: 15		
CIS 3806	Work Related Experience	6	CIM 4303	VFX, Audio, Editing and Composition	3
Higher Diploma in Information Technology Exit Option			CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
CIM 4003	Multimedia Scripting	3	Elective		
CIM 4103	Web Authoring and Administration	3	CIM 4203	Virtual Reality and Simulation	3
AES 3003	Professional Arabic	3	Elective		
CIS 4603	Project Management	3	Elective		

* Additional courses may be offered in each Summer Semester at the discretion of the academic division

Networking Concentration

Course Credits			Course Credits		
Information Technology Core Courses			Networking Concentration Courses		
Required Credits: 60			Required Credits: 36		
CIS 1003	Information Systems in Organisations and Society	3	CIN 2003	Enterprise Network Services	3
CIS 1103	Hardware and Networking	3	CIN 2103	Networking Fundamentals	3
CIS 1203	Web Technologies	3	CIN 2203	Routing Protocols	3
CIS 1303	Data and Information Management	3	CIN 3003	LAN Switching	3
CIS 1403	Fundamentals of Programming	3	CIN 3103	Wireless Networks	3
CIS 2003	Statistics and Probability	3	CIN 3203	WAN Technologies	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIN 3303	Network Security	3
CIS 2203	Applied Discrete Maths	3	CIN 3503	Virtualisation Technologies	3
CIS 2303	Systems Analysis and Design	3	CIN 4003	Routing Solutions for the Enterprise	3
CIS 2403	Object Oriented Programming	3	CIN 4103	Network Management	3
CIS 2806	Work Related Experience I	6	CIN 4203	Voice over Internet Protocol (VoIP) Fundamentals	3
CIS 2903	Operating Systems	3	CIN 4113	Scalable Computer Network	3
CIS 3003	Human Computer Interaction	3	Course Credits		
CIS 3303	System Architecture and Integration	3	4000 Elective Courses		
CIS 3806	Work Related Experience II	6	Required Credits: 6		
CIS 4603	Project Management	3	CIA 4613	Mobile Application Administration	3
CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6	CIB 4203	Customer Relationship Management Systems	3
Course Credits			CIB 4603	Enterprise Resource Planning	3
General Studies			CIS 4403	Cloud Computing	3
Required Credits: 33			CSF 4613	Security Intelligence	3
English, Arabic or other Languages		15			
Humanities or Art		3			
Information Technology or Mathematics		3			
The Natural Sciences		3			
The Social or Behavioural Sciences		9			

Recommended Sequence of Study

Bachelor of Information Technology (Networking)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
CIS 1003	IS in Organization and Society	3	CIS 1303	Data and Information Management	3
CIS 1103	Hardware and Networking	3	CIS 1403	Fundamentals of Programming	3
CIS 1203	Web Technologies	3	LSC 1503	Academic Spoken Communication	3
LSC 1103	Academic Reading and Writing I	3	AES 1013	Arabic Communications I	3
LSS 1003	Life and Study Skills	3	LSM 1003	Applied Mathematics	3
Year 1 Summer Semester*			Year 2 Semester 4		
Required Credits:			Required Credits: 15		
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 15			Required Credits: 15		
CIS 2203	Applied Discrete Math	3	CIS 2003	Statistics and Probability	3
CIS 2403	Object Oriented Programming	3	CIS 2303	Systems Analysis and Design	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIN 2003	Enterprise Network Services	3
CIS 2903	Operating Systems	3	CIN 2103	Networking Fundamentals	3
LSC 2103	Academic Reading and Writing II	3	AES 1003	Emirati Studies	3
Year 2 Summer Semester*			Year 3 Semester 6		
Required Credits: 6			Required Credits: 15		
CIS 2806	Work Related Experience	6	LSS 2403	Innovation and Entrepreneurship	3
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 18			Required Credits: 15		
CIS 3303	System Architecture and Integration	3	CIN 3303	Network Security	3
CIS 3003	Human Computer Interaction	3	CIN 3203	WAN Technologies	3
LSS 1123	Basic Method of Scientific Research and Development	3	CIN 3103	Wireless Networks	3
LSN 2433	Ecology	3	CIN 3503	Virtualization Technologies	3
CIN 2203	Routing Protocols	3			
CIN 3003	LAN Switching	3			
Year 3 Summer Semester*			Year 4 Semester 8		
Required Credits: 6			Required Credits: 15		
CIS 3806	Work Related Experience	6	CIN 4203	Voice over Internet Protocol (VoIP) Fundamentals	3
Higher Diploma in Information Technology Exit Option			CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
CIN 4103	Network Management	3		Elective	3
CIN 4003	Routing Solutions for the Enterprise	3	CIN 4113	Scalable Computer Network	3
	Elective	3			
CIS 4603	Project Management	3			
AES 3003	Professional Arabic	3			

* Additional courses may be offered in each Summer Semester at the discretion of the academic division

Security and Forensics Concentration

		Course Credits			Course Credits
Information Technology Core Courses			Security and Forensics Concentration Courses		
Required Credits: 60			Required Credits: 36		
CIS 1003	Information Systems in Organisations and Society	3	CIN 2003	Enterprise Network Services	3
CIS 1103	Hardware and Networking	3	CIN 2103	Networking Fundamentals	3
CIS 1203	Web Technologies	3	CSF 2113	Programming for Information Security	3
CIS 1303	Data and Information Management	3	CSF 3003	Cyber Law and Ethics	3
CIS 1403	Fundamentals of Programming	3	CSF 3103	Incidence Response and Disaster Recovery	3
CIS 2003	Statistics and Probability	3	CSF 3203	Intrusion Detection and Ethical Hacking	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CSF 3403	Computer Forensics and Investigation	3
CIS 2203	Applied Discrete Maths	3	CSF 3603	Cryptography and Network Security	3
CIS 2303	Systems Analysis and Design	3	CSF 4003	Security and Risk Management	3
CIS 2403	Object Oriented Programming	3	CSF 4103	Web Application and E-Commerce Security	3
CIS 2806	Work Related Experience I	6	CSF 4203	Telecommunications and WAN Security	3
CIS 2903	Operating Systems	3	CSF 4613	Security Intelligence	3
CIS 3003	Human Computer Interaction	3	Course Credits		
CIS 3303	System Architecture and Integration	3	General Studies		
CIS 3806	Work Related Experience II	6	Required Credits: 33		
CIS 4603	Project Management	3	English, Arabic or other Languages		15
CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6	Humanities or Art		3
Course Credits			Information Technology or Mathematics		3
4000 Elective Courses			The Natural Sciences		3
Required Credits: 6			The Social or Behavioural Sciences		9
CIA 4503	Advanced Object Oriented Programming	3			
CIB 4203	Customer Relationship Management Systems	3			
CIB 4603	Enterprise Resource Planning	3			
CIN 4203	Voice over Internet Protocol (VoIP) Fundamentals	3			
CIS 4403	Cloud Computing	3			

Recommended Sequence of Study

Bachelor of Information Technology (Security and Forensics)

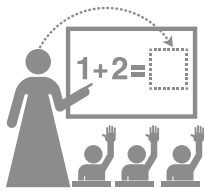
Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
CIS 1003	IS in Organization and Society	3	CIS 1303	Data and Information Management	3
CIS 1103	Hardware and Networking	3	CIS 1403	Fundamentals of Programming	3
CIS 1203	Web Technologies	3	LSC 1503	Academic Spoken Communication	3
LSC 1103	Academic Reading and Writing I	3	AES 1013	Arabic Communications I	3
LSS 1003	Life and Study Skills	3	LSM 1003	Applied Mathematics	3
Year 1 Summer Semester*			Year 2 Semester 4		
Required Credits:			Required Credits: 15		
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 15			Required Credits: 15		
CIS 2203	Applied Discrete Math	3	CIS 2003	Statistics and Probability	3
CIS 2403	Object Oriented Programming	3	CIS 2303	Systems Analysis and Design	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIN 2103	Network Fundamentals	3
CIS 2903	Operating Systems	3	CSF 2113	Programming for Info Security	3
LSC 2103	Academic Reading and Writing II	3	AES 1003	Emirati Studies	3
Year 2 Summer Semester*			Year 3 Semester 6		
Required Credits: 6			Required Credits: 15		
CIS 2806	Work Related Experience	6	CSF 3103	Incidence Response and Disaster Recovery	3
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 18			Required Credits: 15		
CIS 3303	System Architecture and Integration	3	CSF 3403	Computer Forensics and Investigation	3
CIS 3003	Human Computer Interaction	3	CSF 3603	Cryptography and Network Security	3
CIN 2003	Enterprise Network Services	3	LSS 2403	Innovation and Entrepreneurship	3
LSS 1123	Basic Method of Scientific Research and Development	3	CSF 3203	Intrusion Detection and Ethical Hacking	3
LSN 2433	Ecology	3			
CSF 3003	Cyber Law and Ethics	3			
Year 3 Summer Semester*			Year 4 Semester 7		
Required Credits: 6			Required Credits: 15		
CIS 3806	Work Related Experience	6	CSF 4003	Security and Risk Management	3
Higher Diploma in Information Technology Exit Option			CSF 4103	Web Application and E-Commerce Security	3
				Elective	3
			AES 3003	Professional Arabic	3
			CIS 4106	Project Management	3
			Year 4 Semester 8		
			Required Credits: 15		
			CSF 4613	Security Intelligence	3
			CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6
				Elective	3
			CSF 4203	Telecommunications and WAN Security	3

* Additional courses may be offered in each Summer Semester at the discretion of the academic division

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- Maher Abur-Rous**, PhD Computer Science and Information Security, University of Bradford
- Maher Salem**, PhD Computer and Information Science, University of Kassel
- Markos Kyritsis**, PhD Computer Science, Brunel University
- Mary Ashmead**, Master of Arts Linguistics, The University of Edinburgh
- Melina Silva**, Masters Information System and Management, Nanyang Technological University

- Micheal Cormican**, Master of Science E-Learning Interactive Technology, University of Ulster
- Moataz Salhab**, Master of Science E-Commerce, Coventry University
- Moayyad Mohammed**, PhD Engineering, University Politehnica of Bucharest
- Moez Rehman**, PhD Economics Science, University of Hohenheim
- Mohamad Tabbara**, Master of Science Information Technology, The University of Liverpool
- Mohamed Kazi**, Master of Science Computer and Information System, The University of Bolton
- Mohamed Veetiparambil**, Master of Business Administration Technology Management, La Trobe University
- Mohammad Mohammad**, PhD Information System and Management, University of Western Sydney
- Mohammed Alomari**, PhD Instructional Multimedia, University Science Malaysia
- Mohammed Amin**, PhD Computer Science, Universiti Teknologi Malaysia
- Mohammed Saleh**, PhD Electronics and Computer Engineering, Victoria University
- Mouna Sleiman Chebli**, Master of Business Administration Business Administration, University of Atlanta
- Muawya Al Dalaïen**, PhD Network and Computer Security, University Sains Malaysia
- Muhammad Ahmed**, Master of Science Computer Networking, Middlesex University
- Muhammad Farid**, Master of Science Computer Network Technology, Middlesex University
- Muhammad Iqbal**, Master of Science Information System Engineering, The University of Manchester
- Muhammad Khan**, PhD Information Technology, Preston University
- Munther Al Hassan**, Master of Science Satellite Communication Engineering, University of Surrey
- Nadezda Pizika**, Master of Science Mathematics, University of Latvia
- Nafeth Al Hashmoon**, Master of Science Information Technology, The University of Liverpool
- Nasser Nassiri**, PhD Computer Science, Leeds Metropolitan University
- Nedaa Baker Jamil Al Barghuthi**, Master of Science Cyber Security, Zayed University
- Nirupma Bhati**, Master of Education Technology Educational Technology, University of Southern Queensland
- Omar Al-Amir**, PhD Computer Science, Anglia Ruskin University
- Oscar Ragus**, Master of Business Administration Business and Management, University of the Philippines
- Ossama Embarak**, PhD Mathematical Science, Heriot-Watt University
- Owais Tariq**, Master of Science Software Engineering, Iqra University
- Pedro Flores**, Master of Education Educational Leadership, De la Salle University
- Piotr Windyga**, PhD Computer Science, University of Rennes I
- Prithvi Bhattacharya**, PhD Computer and Information Science, The University of Melbourne
- Rajavelu Loganathan**, Master of Science Computer Science, Bharathidasan University
- Rajesh Thomas**, Master of Science Computational Science and Engineering, University of Technology Mauritius
- Ramakrishnan Raman**, Master of Engineering Computer Science, Anna University
- Rana Chakma**, Master of Computer Science Computer Science, University of New South Wales
- Rayomand Darukhanawalla**, Master of Science General Education, Canisius College
- Reem Abuzayekh**, Master of Science Strategic Business and Information Technology, University of Portsmouth
- Rejitha Ravikumar**, Master of Science Operational Research and Computer Applications, Bharathidasan University
- Roch Guenette**, Master of Business Administration Business Administration, Dalhousie University
- Rosemary McConville**, Master of Science Computer Education, University of Ulster
- Rula Al Kayyali**, Master of Applied Science in Information Technology, RMIT University
- Said Badreddine**, Master of Science Computer Science, New York Institute of Technology
- Saifut Khan**, Master of Science Computer Science, University of Tennessee at Knoxville
- Salam Hoshang**, PhD Computer Science, University of Szczecin
- Saleimah Mubarak Rabei Hashel Mesmari**, Masters Human Resource Management, Hamdan Bin Mohammed E-University
- Samah Hadouej**, PhD Computer Science, Paris 6 University
- Samer Abu Salem**, Master of Business Administration Business Management, Keller Graduate School of Management
- Samer Aoudi**, PhD Business Administration - Applied Computer Science, Northcentral University
- Senan Gibson**, Master of Science Education, Curtin University of Technology
- Shahab Ud Din**, Masters Computer Science, Vrije University Amsterdam
- Shamina Rajcoomar**, Master of Education Educational Technology, University of Southern Queensland
- Sharmila Siddhartha**, Master of Business Administration Business Administration, The University of Hull
- Shazia Zubair**, Master of Business Administration Management, Schiller International University
- Sinan Ghulam**, Master of Science Computer Science, Aston University
- Sohail Khan**, Master of Science Distributed Systems and Networks, University of Hertfordshire
- Suvarna Nakhare**, Master of Science Information Technology, Trident University International
- Syed Muhammad Kazmi (Husnain Kazmi)**, Master of Science Computer Science, Blekinge Institute of Technology
- Syed Shah Khan (Habeeb Shakhhan)**, Master of Science Electrical Engineering and Applied Physics, Case Western Reserve University
- Tariq Abu Hilal**, PhD Computer and Information System, University of Banking & Financial Sciences
- Tauseef Kamal**, Master of Science Computer Science, Victoria University
- Thaer Kobbaey**, Master of Science Computer Science, University of Jordan
- Thair Khmour**, PhD Computer Science, University of Essex
- Vishwesh Akre**, PhD Computer and Information System, University of Salford
- Walid Bani Hani**, Master of Science Interactive Multimedia Systems, Liverpool John Moores University
- Wissam Safeh**, Masters Information Systems and Management, University of Phoenix
- Yun-Ke Chang**, PhD Information Science, University of North Texas
- Zahoor Butt**, Masters Computer Science, Newports Institute of Communications and Economics, Karachi
- Zahoor Khan**, PhD Engineering Mathematics, Dalhousie University
- Zakia Ali El-Agure**, PhD Computer and Information Science, Staffordshire University
- Zeeshan Hameed**, PhD Information and Communication Engineering, Ajou University



EDUCATION DIVISION



Education Division

Divisional Mission

The Division of Education is dedicated to offering programs which meet national and international standards to ensure our graduates are highly qualified, employable, reflective practitioners who have the knowledge and ability to apply theory and use best practice within their own particular context.

Senior Staff

Executive Dean: **Dr. Philip Quirke**

Degree offered	
Bachelor of Education	Al Ain Women's College Abu Dhabi Women's College – Khalifa Campus Dubai Women's College Fujairah Women's College Ras Al Khaimah Women's College Sharjah Women's Colleg
Concentrations	Offered at:
Early Childhood Education	Al Ain Women's College Abu Dhabi Women's College – Khalifa Campus, Dubai Women's College Sharjah Women's College
English Language Teaching in Schools	Dubai Women's College Fujairah Women's College Ras Al Khaimah Women's College
Primary Education	Al Ain Women's College Abu Dhabi Women's College - Khalifa Campus, Dubai Women's College Ras Al Khaimah Women's College Sharjah Women's College
Primary Mathematics Grades 1-3	Dubai Women's College Fujairah Women's College
Primary Science Grades 1-3	Dubai Women's College

Bachelor of Education

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Bachelor of Education (B.Ed.) program is dedicated to producing future innovative educators who can act as agents of change by bringing experience of new methodologies and paradigms in order to transform the delivery of instruction. Through the internationally certified curriculum, which has teaching practicum and learning by doing action research as its keystones, it is ensured that the B.Ed. graduates are highly qualified, employable, reflective practitioners who have the knowledge and ability to apply theory and use best practice within their own particular context.

Program Description

The Bachelor of Education (B.Ed.) program aims to produce teachers with qualifications in a range of specialisations for UAE schools. The B.Ed. program offers students one of the most rewarding careers and an opportunity to shape the future of their country. Prepared with up-to-date knowledge of educational theory, HCT education students develop and practice their teaching skills in UAE government and private school classrooms. This hands-on approach to learning gives students the teaching skills they need to excel in their future careers.

The program offers five distinct concentrations:

- **Early Childhood Education**
- **English Language Teaching in Schools**
- **Primary Education**
- **Primary Mathematics Grades 1-3**
- **Primary Science Grades 1-3**

The program is offered at:

Al Ain Women's College

Concentrations offered: Early Childhood Education, Primary Education

Abu Dhabi Women's College – Khalifa Campus

Concentrations offered: Early Childhood Education, Primary Education

Dubai Women's College

Concentrations offered: Early Childhood Education, English Language Teaching in Schools, Primary Education, Primary Mathematics Grades 1-3, Primary Science Grades 1-3

Fujairah Women's College

Concentrations offered: English Language Teaching in Schools, Primary Mathematics Grades 1-3

Ras Al Khaimah Women's College

Concentrations offered: English Language Teaching in Schools, Primary Education

Sharjah Women's College

Concentrations offered: Early Childhood Education, Primary Education

Program Learning Outcomes

1. Demonstrate and distinguish coherent, specialised, factual and theoretical knowledge of teaching and learning principles and concepts.
2. Apply teaching and learning principles, theoretical concepts and skills to a range of contexts and tasks in a learning environment.
3. Demonstrate independence in learning; transfer learning to new situations; reflect critically upon a range of issues, tasks and contexts.
4. Make informed decisions based on individual differences e.g. race, gender, ethnic and cultural perspectives.
5. Use appropriate technology to enhance teaching, learning, assessment and professional responsibilities.

Completion Requirements

All students must attain a Band 6 IELTS to progress into the final year in order to meet employment requirements for the profession.

Bachelor of Education Core Courses		
Required Credits: 63		
EDU 1003	Introduction to Theories of Learning 1a	3
EDU 1303	Learning Technologies for the Classroom	3
EDU 1503	Introduction to Theories of Learning 1b	3
EDU 2303	Language and Development: SLA Principles and Pedagogy	3
EDU 2803	Teaching Learners with Special Needs	3
EDU 3003	Global Education and Leadership	3
EDU 3033	English for Academic Purposes	3
EDU 4003	Research Methods and Reflective Practice in Education	3
EDU 4203	Curriculum Design	3
EDU 4503	Research Project	3
EPC 1403	Practicum 1a	3
EPC 1903	Practicum 1b	3
EPC 2403	Practicum 2a	3
EPC 2903	Practicum 2b	3
EPC 3403	Practicum 3a	3
EPC 3903	Practicum 3b	3
EPC 4406	Practicum 4a	6
EPC 4909	Practicum 4b (Internship)	9

Early Childhood Education Concentration		
Code: ECEC		
Required Credits: 24		
ECE 2003	Teaching Mathematics in the Early Years: Skills and Concept Acquisition	3
ECE 2203	Learning through the Visual Arts	3
ECE 2503	Theories of Teaching and Learning that impact the Preschool Curriculum	3
ECE 2603	Learning through the Performing Arts	3
ECE 3003	Literacies in Early Childhood	3
ECE 3203	Learning through Literature	3
ECE 3503	Planning and Assessment in Early Childhood Education	3
ECE 3703	Building Learning Communities in Early Childhood Education	3

English Language Teaching in Schools Concentration		
Code: ELTC		
Required Credits: 24		
ELT 2003	Language Arts A (Speaking, Listening and Vocabulary)	3
ELT 2203	Language Arts B (Teaching Methods for the Primary School Teacher A)	3
ELT 2503	Language Arts C (Reading/Writing/Literature)	3
ELT 2603	Language Arts D (Teaching Methods for the Primary School Teacher)	3
ELT 3003	Child and Adolescent Literature	3
ELT 3203	Language Arts E (Teaching Methods for the Secondary School English)	3
ELT 3503	Literacy and Grammar in the Second Language Curriculum	3
ELT 3703	Language Arts F (Teaching Methods for the Secondary School English)	3

Primary Education Concentration		
Code: EPRC		
Required Credits: 24		
EPR 2003	Language Arts A (Speaking, Listening and Vocabulary)	3
EPR 2203	Language Arts B (Teaching Methods for the Primary School Teacher A)	3
EPR 2503	Language Arts C (Reading/Writing/Literature)	3
EPR 2603	Language Arts D (Teaching Methods for the Primary School Teacher)	3
EPR 3003	Mathematics for the Primary School Teacher	3
EPR 3203	Mathematics Teaching Methods for the Primary School Teacher	3
EPR 3503	Science for the Primary School Teacher	3
EPR 3703	Science Teaching Methods for the Primary School Teacher	3

Primary Mathematics (Grades 1-3) Concentration		
Code: EMTH		
Required Credits: 24		
MTH 1103	Pre Calculus	3
EMA 2013	Methods and Theory for Teaching Mathematics	3
PHY 1103	Physics 1	3
MTH 1203	Calculus 1	3
EMA 3003	Tools and Manipulatives for Primary Mathematics	3
EMA 3013	Inquiry Based Mathematics Teaching & Learning	3
EMA 3103	Mathematics Concepts for the Primary School Teacher	3
EMA 3113	STEM Education for Mathematics Teachers	3

Primary Science (Grades 1 – 3) Concentration		
Code: ESCI		
Required Credits: 24		
ESC 2003	Introduction to Earth & Space Science for the Primary School Teacher	3
ESC 2013	Methods and Theory for Teaching Science	3
MTH 1203	Calculus 1	3
ESC 2103	Inquiry Based Science Teaching and Learning	3
PHY 1103	Physics 1	3
ESC 3013	Introduction to Life Sciences for the Primary School Teacher	3
ESC 3103	Introduction to Chemistry for the Primary School Teacher	3
ESC 3113	STEM Education for Science Teachers	3

General Studies	
Required Credits: 33	
English, Arabic or other Languages	15
Humanities or Art	3
Information Technology or Mathematics	3
The Natural Sciences	3
The Social or Behavioural Sciences	9

Total Required Credits	120
Maximum Duration of Study	6 years
Cost Recovery Programme	
Minimum Duration of Study	4 years
Programme Code	EDUBA

Recommended Sequence of Study

Bachelor of Education (in 'Concentration')

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
EDU 1003	Introduction to Theories of Learning 1a	3	EDU 1503	Introduction to Theories of Learning 1b	3
EDU 1303	Learning Technologies for the Classroom	3	EPC 1903	Practicum 1b	3
EPC 1403	Practicum 1a	3	LSC 1103	Academic Reading and Writing 1	3
LSS 1003	Life and Study Skills	3	EDU 1803	Introduction to Math and Science in the Classroom	3
LSM 1123	Quantitative Reasoning	3	LSS 1123	Basic Methods of Scientific Research and Development	3
Year 1 Summer Semester*			Year 2 Semester 4		
Required Credits:			Required Credits: 15		
Year 2 Semester 3			Year 3 Semester 6		
Required Credits: 15			Required Credits: 15		
EDU 2303	Language and Development: SLA Principles and Pedagogy	3	AES 1013	Arabic Communications 1	3
EPC 2403	Practicum 2a	3	EPC 2903	Practicum 2b	3
AES 1003	Emirati Studies	3	LSC 1503	Academic Spoken Communication	3
EXX 2003	Concentration 1	3	EXX 2503	Concentration 3	3
EXX 2203	Concentration 2	3	EXX 2703	Concentration 4	3
Year 2 Summer Semester*			Year 3 Semester 5		
Required Credits:			Required Credits: 15		
Year 3 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
LSC 2103	Academic Reading and Writing 2	3	EDU 4003	Research Methods and Reflective Practice in Education	3
EPC 3403	Practicum 3a	3	EDU 4203	Curriculum Design	3
EDU 2803	Teaching Learners with Special Needs	3	AES 3003	Professional Arabic	3
EXX 3003	Concentration 5	3	EPC 4406	Practicum 4a	6
EXX 3203	Concentration 6	3	EDU 4503	Research Project	3
Year 3 Summer Semester*			Year 4 Semester 8		
Required Credits:			Required Credits: 15		
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
EDU 4003	Research Methods and Reflective Practice in Education	3	EDU 3003	Global Education and Leadership	3
EDU 4203	Curriculum Design	3	EPC 4909	Practicum 4b (Internship)	9
AES 3003	Professional Arabic	3			
EPC 4406	Practicum 4a	6			

* Additional courses may be offered in each Summer Semester at the discretion of the Academic Division.

Academic Staff

AL AIN WOMEN'S COLLEGE

David Waugh, Master of Education, Mount Saint Vincent University
Suzan Saeed, Master of Education, Montclair State University
Neil Hunt, Ph.D., University of Exeter
Amber Garcia, Master of Education, University of Phoenix
Kesha Oliver, Master of Education, University of Houston
Sharon Hiebert, Master of Education, University of Toronto
Jolene Scullion, Master of Education, University of Gloucester
Winona Smith, Master of Arts, Notre Dame College

ABU DHABI WOMEN'S COLLEGE – KHALIFA CAMPUS

Philip Quirke, Doctorate in Philosophy, Aston University
Grace Faure Bryan, Master of Education, Hertfordshire University
Josephine Butler, Master of Education, University of Stirling
Melissa McMinn, Master of Education, Murdoch University
Adamantia Tzovanis, Master of Education, University of New England
Gabriela Hajir, Master of Education, The University of Texas
Tamika Gordon, Master of Education, Texas Southern University
Mary Quinlan, Master of Education, University of Arizona
Sarah Mark Paul Thompson, Bachelor of Arts, Higher Colleges of Technology
Latifa Ghareeb Ahmed Mohammed Al Mansoori, Bachelor of Arts, Higher Colleges of Technology
Fatema Al Mansoori, Bachelor of Arts, Higher Colleges of Technology
Ebtesam Alzahmi, Bachelor of Arts, Higher Colleges of Technology

DUBAI WOMEN'S COLLEGE

Anda Lucia, Master of Education, Fitchburg State University
Aneela Bukhari, Master of Arts, Liverpool Hope University
Dean Vanvelzer, Masters of Education, Murdoch University (Dubai Campus)
John Ingoldsby, Master of Arts, University of Leicester
Karen Brodie, Master of Education, The Open University
Maria Brown, Master of Education, The University of Manchester
Khadija Mohammed Saleh Ali Al Jismi, Master of Education, Higher Colleges of Technology
Lavinia Tamarua, Ph.D., The University of Auckland
Mona Abu Ghazalah, Master of Arts, University of Phoenix
Yvonne Pattison, Ed.D., University of Sussex
Melissa Hedges, Master of Arts in Teaching, Grand Canyon University
Sarah Hyde, Master of Education, The Open University

FUJAIRAH WOMEN'S COLLEGE

Slim Khemakhem, Ph.D., University of the West of England
Laila Helal Mohamed Helal Alkaabi, Bachelor in Human Services and Counseling, UAE University
James Ishler, Ph.D., University of Pennsylvania
Martha Banfa, Ph.D., University of Nottingham
Katherine Emmons, Ph.D., University of California
Binod Gurung, Ph.D., New Mexico State University
Amnah Mobarak Obaid Mobarak Salem Al Hmoudi, Bachelor of Education, Higher Colleges of Technology
Aisha Saif Sultan Saeed Mukassah Al Samahi, Master of Education, University of Deakin
Huda Abdulla Mohamed Abdulla Al Blooshi, Master of Education, University of Deakin
Amnah Humaid Ali Khalfan Al Kindi, Master of Education, University of Deakin

RAS AL KHAIMAH WOMEN'S COLLEGE

Fatema Alawadi, Bachelor of Education, Associate Fellow, Higher Colleges of Technology, Higher Education Academy
Alyaa Alzaabi, Master of Arts, Hamdan Bin Mohammed Smart University

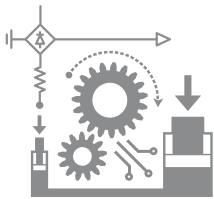
La Tonya Michell Bell, Master of Education, Sam Houston State University

Laila Boisselle, Master of Education, The University of the West Indies
Garnel Desravins, Ed. S. Educational Specialist, Nova Southeastern University
Mark Eckersley, Master of Education, University of Melbourne
Colleen Menichini, Masters of Adult Education, Trident University
Allan Mutambo, Master of Education, Master of Arts, Elon University, University of the Witwatersrand
Cara Weston-Edell, Ph.D., Tilburg University

SHARJAH WOMEN'S COLLEGE

Brante Dashiell, Bachelor of Science, Master of Education, Ed.D., University of Maryland, George Washington University, Nova Southeastern University
Sharaaf Mohammad Qassem Ghashwaq Al Mahri, Higher Diploma (IT Trainer), Higher Colleges of Technology
Antoinette Wiseman, Master of Education, Concordia University
Elizabeth Taylor, Master of Arts (Education), Liverpool HOPE University
Basel Badran, Master of Education, British University in Dubai
Pauline Keith, BSC Modern Languages (English Language), MED English Language Teaching (English Language Teaching) British University in Dubai
Julie Watson, Cert. in TESOL (TESOL), Diploma (Teaching & Learning), Master of Education (Arts Education) University of New England
Samya Matouk, Post Degree Certificate (Mentoring & Coaching), Bachelor (Biomedical Science), Certificate (CELTA), MA in Education (Curriculum And Instruction, University of Phoenix)
Muna Mohammed Ali Khuzam Al Suwaidi, Bachelor of Education, Higher Colleges of Technology
Maryam Saeed Majed Mohammed Al Shamsi, Bachelor of Education, Higher Colleges of Technology
Nadya Moosa Abdulla Ali, Bachelor of Education, Higher Colleges of Technology
Aisha Mohamed Zayed Khalifa Al Teneiji, Bachelor of Education, Higher Colleges of Technology





**ENGINEERING TECHNOLOGY
AND SCIENCE**
DIVISION



Division of Engineering Technology and Science

The Division of Engineering Technology and Science aims to produce graduates effective in the design and practical application of engineering technology solutions. As students, they are taught the ability to lead successfully, work efficiently, and communicate effectively in a team. Their experience during the engineering undergraduate program will instill ethical values and professional standards, therefore, helping them expand their knowledge and competencies through continuing education and other lifelong learning experiences. Thus, making them significant members of the community by contributing their skills and knowledge either locally or internationally.

Employment prospects for HCT Engineering Technology and Science graduates are very strong and cover many local and international industrial sectors including:

- Aviation
- Computing
- Construction
- Consulting
- Defense
- Energy
- Governance
- Health care
- Infrastructure support and maintenance
- Manufacturing
- Oil and gas
- Telecommunications

Divisional Mission

The Mission of the Division of Engineering Technology and Science is to “provide world class engineering programs empowering graduates with the desire for learning, discovery and innovation, and provide highly competent technologists and engineers to meet present and future industry needs nationally and globally”. The reputation and academic integrity of Engineering Technology and Science programs at HCT is high. Most of the Bachelor programs in Engineering Technology offer a sound Diploma exit option.

Senior Staff

Executive Dean – **Dr. Mohammad-Amin Al Jarrah**

Associate Dean – **Dr. Sameh Ghwanmeh**

Degrees offered

The current programs being offered by the Division of Engineering Technology and Science are: -

Programs	Offered at:
Bachelor of Aeronautical Engineering Technology	Al Ain Women's College
Bachelor of Aviation Maintenance Engineering Technology: Airframe and Aeroengines	Abu Dhabi Men's College, Dubai Men's College
Bachelor of Aviation Maintenance Engineering Technology: Avionics	Abu Dhabi Men's College, Dubai Men's College
Bachelor of Chemical Engineering Technology	Abu Dhabi Men's College, Ruwais Men's College, Ruwais Women's College
Bachelor of Civil Engineering Technology	Abu Dhabi Men's College, Dubai Men's College
Bachelor of Electrical Engineering Technology	Al Ain Men's College, Al Ain Women's College, Abu Dhabi Men's College, Abu Dhabi Women's College, Dubai Men's College, Dubai Women's College, Fujairah Men's College, Fujairah Women's College, Ras Al Khaimah Men's College, Ras Al Khaimah Women's College, Sharjah Men's College, Sharjah Women's College, Western Region Colleges

Bachelor of Industrial Engineering Technology	Abu Dhabi Women's College, Dubai Women's College
Bachelor of Logistics Engineering Technology	Abu Dhabi Men's College
Bachelor of Applied Science in Marine Engineering Technology	Abu Dhabi Men's College
Bachelor of Applied Science in Marine Transport	Abu Dhabi Men's College
Bachelor of Applied Science in Maritime Engineering Technology and Naval Architecture	Abu Dhabi Men's College
Bachelor of Mechanical Engineering Technology	Al Ain Men's College, Abu Dhabi Men's College, Dubai Men's College, Fujairah Men's College, Fujairah Women's College, Ras Al Khaimah Men's College, Sharjah Men's College, Sharjah Women's College, Ruwais Men's College
Bachelor of Mechatronics Engineering Technology	Dubai Men's College, Ras Al Khaimah Men's College

Admission Requirements

A. Direct admission:

1. Meet general admission criteria specified in Program Placement Procedures LP202.1
2. Pass a Physics Placement Test with a minimum score of 70.

B. Conditional admission:

1. If the physics placement test requirement is not met, admission is granted upon completion of the Pre-Physics course. Meanwhile student can proceed in his major as direct admission.

C. Admission upon completion of Foundation Program:

1. Foundation students are eligible to Engineering Technology admission upon completion of the Foundation program with Foundations Math 3 (FND M030) grade of C or better.
2. Pass a Physics Placement Test with a minimum score of 70 or completion of the Pre-Physics course.

Diploma Exit Option

- **Optional Exit:** Engineering students may select the diploma track and can exit with a Diploma after completing the requirements outlined in the respective program with a minimum CGPA of 2.0.
- **Mandatory Exit:** After completion of 40 credits in Engineering core courses and Mathematics and Science required courses (Math, Chemistry and Physics), students must have a minimum CGPA of 2.0 excluding General Studies to progress into Year 3 of the program. Students who do not meet this requirement are required to follow the Diploma track.

Completion Requirements

Bachelor Degree Completion Requirements

Students seeking the Engineering Technology Bachelor degree must successfully complete the following minimum requirements:

1. Minimum of 146 credits as shown below. Note: For Aviation and Maritime programs, the minimum number of credits is specified in their relevant section of the Catalogue.
 - a. Program required courses including a work placement of 16 weeks: see program completion requirements.
 - b. Minimum of 21 credits of Math and Science course credits. Note: For Industrial and Logistics programs, the minimum no. of Math and Science credits is 18.
 - c. Minimum of 33 credits of General Studies course requirements according to the General Studies breakdown and as advised in the recommended sequence of study for each program.
 - d. Major electives: see program elective requirements.
2. Minimum CGPA of 2.00.

Diploma Degree Completion Requirements

Students seeking the Engineering Technology Diploma degree must successfully complete the following minimum requirements:

1. Minimum number of credits as specified in the program of interest among which the following requirements needs to be met:
 - a. Program required courses including a work placement of 8 weeks.
 - b. Minimum of 15 credits of Math and Science course requirements.
 - c. Minimum of 24 credits in General Studies requirements according to the General Studies breakdown and as advised in the recommended sequence of study for each program
2. Minimum CGPA of 2.00

Department of Aeronautical Engineering Technology (AET)

Bachelor of Aeronautical Engineering Technology (BAEET)

Program Mission

To provide highly qualified Aeronautical Engineers with state of the art knowledge, technical and leadership skills, who are committed to lifelong learning, the pursuit of excellence and innovation and to best serve the Aeronautics profession.

Program Description

The Bachelor of Aeronautical Engineering Technology program provides an excellent, broad education with a focused area of specialization options to cater for the UAE's globally-oriented aircraft industry. Aeronautical Engineering Technology graduates are trained to support the design, development, and maintenance of aviation systems to the highest level of industry standards. HCT Aeronautical Engineers are trained to use state-of-the-art software and hardware to enhance their analytical and practical skills in aero-engineering to equip them with essential tools and skills to strengthen their career opportunities and facilitate their entry into the industrial world.

The Bachelor of Aeronautical Engineering Technology curriculum produces high-quality engineers known for productivity, timeliness, dedication and competence in the workplace. Graduates have the ability to work logically, accurately and efficiently; to gather and use information effectively; and to continue enhancing their careers through lifelong learning. The program stresses the effective use of technology, information resources and engineering tools. It also instills leadership qualities based on moral and ethical principles, coupled with sound and rational judgment. In addition, it is designed to prepare interested students for graduate studies in Aeronautical Engineering Technology and other areas of professional practice.

Students will have the option to graduate with a Diploma in Aeronautical Engineering Technology upon the successful completion of 80 credits inclusive of 8 weeks of Work Placement.

Program Educational Objectives

The Program Educational Objectives of the Bachelor of Aeronautical Engineering Technology (BAEET) program are to:

1. Provide Aeronautical Engineering Technology professionals with the technical knowledge and skills required by the industry to develop, design, and maintain aviation systems to highest level of industry standards.
2. Prepare graduates for a successful career as effective decision makers with strong communication and teamwork skills and an understanding of the global, ethical and social implications of the industry and aero-engineering profession.
3. Provide graduates with strong commitment to lifelong learning, continuing education, and professional growth.
4. Provide graduates with leadership qualities and commitment to contribute actively to achieving the Abu Dhabi Vision 2030.

Program Student Outcomes

Upon graduation, a HCT graduate in Bachelor of Aeronautical Engineering Technology (BAEET) should demonstrate:

- a. An ability to select and apply the knowledge, techniques, skills, and modern tools of aeronautical engineering to broadly-defined engineering technology activities.
- b. An ability to select and apply a knowledge of mathematics, science, engineering, and technology to aeronautical engineering technology problems that require the application of principles and applied procedures or methodologies.
- c. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
- d. An ability to design systems, components, or processes for broadly-defined aeronautical engineering technology problems appropriate to program educational objectives.
- e. An ability to function effectively as a member or leader of a technical team.
- f. An ability to identify, analyze, and solve broadly-defined aeronautical engineering technology problems.
- g. An ability to apply written, oral, and graphical communication in both technical and non-technical environments and an ability to identify and use appropriate technical literature.
- h. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- i. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
- j. A knowledge of the impact of engineering technology solutions in a societal and global context.
- k. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Bachelor of Aeronautical Engineering Technology degree must successfully complete the following minimum requirements:

1. Minimum of 146 credits which are divided as follows:
 - a. Minimum of 80 credits of major requirements, including Work Placement for 16 weeks.
 - b. Minimum of 12 credits of major electives.
 - c. Minimum of 21 credits of Math and Science course requirements.
 - d. General Studies requirements of 33 credits according to the General Studies breakdown.
2. Minimum CGPA of 2.00.

Course Credits

Core Courses		
Required Credits: 80		
AET 2103	Fundamentals of Flight	3
AET 2403	Applied Thermofluids	3
AET 2902	Sophomore Design Project	2
AET 3101	Aeronautical Engineering Lab	1
AET 3303	Aircraft Structures	3
AET 3413	Applied Aerodynamics-I	3
AET 3423	Applied Aerodynamics-II	3
AET 3503	Fixed and Rotary Wing Assemblies	3
AET 3513	Aircraft Design	3
AET 3603	Aircraft Dynamics and Stability	3
AET 4433	Aircraft Propulsion	3
AET 4613	Avionics Systems	3
AET 4902	Capstone Design Project I	2
AET 4912	Capstone Design Project II	2
EGN 1133	Design Thinking in Technology	3
EGN 2712	Applied Programming for Engineers	2
EGN 2806	Work Placement I	6
EGN 3012	Project Management	2
EGN 3212	Economics for Engineering	2
EGN 3806	Work Placement II	6
ELE 2153	Electrical Engineering Fundamentals	3
MCE 2203	Applied Statics	3
MCE 2213	Mechanics of Materials	3
MCE 2223	Applied Dynamics	3
MCE 2303	Materials Selection and Testing	3
MCE 2311	Solid Modelling	1
MCE 4603	Control Systems	3
MTE 3603	Electronics Systems and Circuits	3

Course Credits

Major Elective Courses		
Required Credits: 12		
AET 4123	Aircraft Reliability and Maintenance Engineering	3
AET 4143	Human Factors	3
AET 4203	Composite Materials	3
AET 4213	Rotary Wing Aircraft	3
AET 4313	Manufacturing Processes	3
AET 4323	Non Destructive Testing	3
AET 4443	Computational Fluid Dynamics	3
AET 4453	Aerospace vehicles	3
AET 4503	Finite Element Analysis	3
AET 4863	Special Topics in Aeronautical Engineering	3
AET 4893	Directed Studies	3

Mathematics and Science Courses		
Required Credits: 21		
CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra and Differential Equations	3
MTH 3013	Calculus III	3
PHY 1203	Physics II	3

General Studies		
Required Credits: 33		
English, Arabic or other Languages		15
Humanities or Arts: AES 1003 Emirati Studies		3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering		3
Natural Sciences: PHY 1103 Physics I		3
Social or Behavioral Sciences		9

<i>Total Required Credits</i>	<i>146</i>
<i>Maximum Duration of Study</i>	<i>6 years</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4 years</i>
<i>Program Code</i>	<i>BAEET</i>
<i>Major Code</i>	<i>AET</i>

Diploma in Aeronautical Engineering Technology (DAEET) Exit Option

Program Educational Objectives

The Program Educational Objectives of the Diploma in Aeronautical Engineering Technology (DAEET) program are to:

1. Provide Aeronautical Engineering Technology professionals with the technical knowledge and skills required by the industry to maintain aviation systems to highest level of industry standards.
2. Prepare graduates for a successful career with strong communication and teamwork skills and an understanding of the global, ethical and social implications of the aviation industry.
3. Provide graduates with strong commitment to lifelong learning, continuing education, and professional growth.

Program Student Outcomes

Upon graduation, a HCT graduate in Diploma in Aeronautical Engineering Technology (DAEET) should demonstrate:

- a. An ability to apply the knowledge, techniques, skills, and modern tools of aeronautical engineering to narrowly defined engineering technology activities.
- b. An ability to apply a knowledge of mathematics, science, engineering, and technology to aeronautical engineering technology problems that require limited application of principles but extensive practical knowledge.
- c. An ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments.
- d. An ability to function effectively as a member of a technical team.
- e. An ability to identify, analyze, and solve narrowly defined aeronautical engineering technology problems.
- f. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- g. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- h. An understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity.
- i. A commitment to quality, timeliness, and continuous improvement.

Diploma Completion Requirements

Students seeking the Diploma in Aeronautical Engineering Technology must successfully complete the following minimum requirements:

1. A minimum of 80 credits, as follows:
 - 41 credits of major program requirements, including work placement for 8 weeks
 - Minimum of 15 credits of Math and Science course requirements

- Minimum of 24 credits of General Studies requirements according to the General Studies breakdown.
2. A minimum CGPA of 2.00

		Course Credits
Core Courses		
Required Credits: 41		
AET 2103	Fundamentals of Flight	3
AET 2403	Applied Thermofluids	3
AET 2902	Sophomore Design Project	2
AET 3503	Fixed And Rotary Wing Assemblies	3
AET 4613	Avionics Systems	3
EGN 1133	Design Thinking in Technology	3
EGN 2806	Work Placement I	6
EGN 3012	Project Management	2
ELE 2153	Electrical Engineering Fundamentals	3
MCE 2203	Applied Statics	3
MCE 2213	Mechanics of Materials	3
MCE 2303	Material Selection and Testing	3
MCE 2311	Solid Modelling	1
MTE 3603	Electronics Systems and Circuits	3

		Course Credits
Mathematics and Science Required Courses		
Required Credits: 15		
CHM1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
PHY 1203	Physics II	3

		Course Credits
General Studies		
Required Credits: 24		
English, Arabic or other Languages		9
Humanities or Arts : AES 1003 Emirati Studies		3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering		3
Natural Sciences: PHY 1103 Physics I		3
Social or Behavioral Sciences		6

Total Required Credits	80
Maximum Duration of Study	3 years
Cost Recovery Program	No
Minimum Duration of Study	2 years
Program Code	DAEET
Major Code	AET

Recommended Sequence of Study

Bachelor of Aeronautical Engineering Technology

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
LSC 1103	Academic Reading and Writing I	3	LSC 2103	Academic Reading and Writing II	3
LSS 1003	Life and Study Skills	3	MTH 1113	Statistics for Engineering	3
PHY 1103	Physics I	3	MTH 1203	Calculus I	3
EGN 1133	Design Thinking in Technology	3	PHY 1203	Physics II	3
MTH 1103	Pre Calculus	3	LSS 1123	Basic Methods of Scientific Research and Development	3
Year 1 Summer Semester					
Required Credits: 6					
AES 1013	Arabic Communications I	3			
CHM 1103	Engineering Chemistry	3			
Year 2 Semester 3			Year 2 Semester 4		
Required Credits:16			Required Credits:16		
AES 1003	Emirati Studies	3	MTE 3603	Electronics Systems and Circuits	3
ELE 2153	Electrical Engineering Fundamentals	3	AET 2103	Fundamentals of Flight	3
MTH 2103	Calculus II	3	AET 2403	Applied Thermofluids	3
MCE 2203	Applied Statics	3	MCE 2213	Mechanics of Materials	3
MCE 2303	Material Selection and Testing	3	AET 2902	Sophomore Design Project	2
MCE 2311	Solid Modelling	1	EGN 3012	Project Management	2
Year 2 Summer Semester (Diploma)			Year 2 Summer Semester (Diploma)		
Required Credits:6			Required Credits:6		
AET 3503	Fixed and Rotary Wing Assemblies	3	EGN 2806	Work Placement I	6
AET 4613	Avionics Systems	3			
Year 2 Summer Semester (Bachelor)			Year 2 Summer Semester (Bachelor)		
Required Credits:6			Required Credits:6		
MTH 2503	Linear Algebra and Differential Equations	3	EGN 2806	Work Placement I	6
MCE 2223	Applied Dynamics	3			
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 17			Required Credits: 15		
LSC 2183	English for Specific Purposes	3	LSS 2403	Innovation and Entrepreneurship	3
MTH 3013	Calculus III	3	AET 3603	Aircraft Dynamics and Stability	3
AET 3303	Aircraft Structures	3	AET 3423	Applied Aerodynamics-II	3
AET 3413	Applied Aerodynamics-I	3	AET 3513	Aircraft Design	3
EGN 2712	Applied Programing for Engineers	2	EGN 3212	Economics for Engineering	2
AET 3503	Fixed And Rotary Wing Assemblies	3	AET 3101	Aeronautical Engineering Lab	1
Year 3 Summer Semester					
Required Credits: 6					
EGN 3806	Work Placement II	6			
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 14			Required Credits: 14		
AET 4433	Aircraft Propulsion	3	AES 3003	Professional Arabic	3
MCE 4603	Control Systems	3	AET 4613	Avionics systems	3
AET 4XX3	Major Elective	3	AET 4XX3	Major elective	3
AET 4XX3	Major Elective	3	AET 4XX3	Major elective	3
AET 4902	Capstone Design Project I	2	AET 4912	Capstone Design Project II	2

Faculty

AL AIN WOMEN'S COLLEGE

Amanuel Melake, PhD CFD in Turboengine Aerodynamics, RWTH Aachen University of Technology

Feras Darwish, PhD Mechanical Engineering, North Carolina A&T State University

Hassan Jishi, PhD Aerospace Engineering, Khalifa University

Mohamad Muflehi, Masters Electronics, Sheffield Hallam University

Utsav KC, PhD Aerospace Engineering, University of Texas at Austin

Department of Aviation Maintenance Engineering Technology (AVET and AAET)

Bachelor of Aviation Maintenance Engineering Technology: Airframe and Aeroengines (BAVET)

Program Mission

Provide aviation graduates and professionals with the necessary knowledge, skills, attitude, and lifelong learning abilities to pursue excellence while meeting the international aviation standards to fulfil the needs of aviation community

Program Description

The Bachelor of Aviation Maintenance Engineering Technology (BAVET) program articulates into the GCAA licensed outcome which is approved by the General Civil Aviation Authority (GCAA) UAE (CAR 147/02/2009). The program provides the graduates with excellent knowledge and skills to work effectively and professionally in the aviation community. Furthermore, it has the important element of broad education and continuous lifelong learning abilities.

Graduates can take positions in the aviation industry and can work individually or in teams to practically apply Aviation Maintenance skills and solutions with consideration of the industry regulations and ethics. Students will graduate with a Bachelor degree and after a further two years industry experience and meeting the General Civil Aviation Authority requirements they will have a license of category 'B1.1' (Airframe and Aeroengines). They also have the option to exit the program with a diploma degree after completion of the second year (see diploma degree requirements and conditions stated below). Employment opportunities for aviation graduates within the UAE, Gulf region and worldwide are abundant and expanding. Employment opportunities include military operations, state commercial operations, private aviation operations and aviation supporting industries and logistics.

The program curriculum covers all aviation maintenance training modules required by the General Civil Aviation Authority (GCAA) and are compatible with European Aviation Safety Agency (EASA). The program also has the main and important engineering courses and the General Studies courses which will prepare the students to be competent engineers and productive educated professionals. Graduates will be ready for positions as aviation engineers and technicians with the technical and managerial skills necessary to enter careers in aviation maintenance, management, and operations. Students will gain the required practical knowledge and skills through labs, practical assignments and work placements.

The curriculum aims to produce high-quality engineers known for productivity, timeliness, dedication, and competence in the workplace. Graduates have the ability

to work logically, accurately and efficiently; to gather and use information effectively; and to continue enhancing their careers through lifelong learning. The program stresses the effective use of technology, information resources and engineering tools. The program provides leadership qualities based on moral and ethical principles coupled with sound and rational judgment. Finally, the program is designed to prepare motivated students for graduate studies in Aviation Engineering and other related areas of professional practices.

Students will have the option to graduate with a Diploma in Aviation Maintenance Engineering Technology (Airframe and Aeroengines) upon the successful completion of 77 credits inclusive of 8 weeks of Work Placement.

Program Educational Objectives

The Program Educational Objectives of the Bachelor of Aviation Maintenance Engineering Technology (Airframe and Aeroengines) program are to:

1. Provide aviation graduates with the technical knowledge and skills required by the aviation industry to maintain a variety of aircraft systems to the highest standards.
2. Prepare graduates for a successful career as effective decision makers with strong communication and teamwork skills and an understanding of the global, ethical and social implications of the aviation industry and engineering profession.
3. Prepare graduates with a strong commitment to lifelong learning, continuing education and professional growth.
4. Provide graduates with leadership qualities and commitment to contribute actively to achieving the regulatory authorities' mission.

Program Student Outcomes

Upon graduation, a HCT graduate in Bachelor of Aviation Maintenance Engineering Technology (Airframe and Aeroengines) program should demonstrate:

- a. An ability to integrate and utilize theoretical and practical knowledge on mathematics, natural sciences and aviation maintenance engineering to offer engineering solutions.
- b. An ability to identify, explain, formulate and solve aviation maintenance engineering problems; select and apply appropriate analytical methods and modeling techniques.
- c. An ability to apply the acquired comprehensive theoretical and practical knowledge in accordance with the national and international aviation authorities' regulations and manufacturer's instructions.
- d. A comprehensive knowledge on the forensic, communal

- and environmental framework in which the aviation operations are conducted.
- e. An ability to analyze a system, a system component or a process; utilize advanced design methods to meet the defined requirements under realistic constraints.
 - f. An ability to identify and analyze problems, propose solutions based on research, proof and results from different sources and measurements; develop appropriate corrective action.
 - g. An ability to use computer software, information and communication technologies at a level required by aviation maintenance engineering technology.
 - h. An understanding of the need for lifelong learning; an ability to learn new developments in science and technology, access information, review literature, and make conclusions.
 - i. An ability to propose, build and lead team works in engineering projects related to aircraft maintenance technology.
 - j. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
 - k. An ability to communicate effectively in writing, orally, and graphically and an ability to identify and use appropriate technical literature.
 - l. An understanding of the need for and an ability to engage in self-directed continuing professional development.
 - m. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
 - n. A knowledge of the impact of engineering technology solutions in a societal and global context.
 - o. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Bachelor of Aviation Maintenance Engineering Technology (Airframe and Aeroengines) degree must successfully complete the following requirements:

1. Minimum of 150 credits which are divided as follows:
 - a. Minimum of 99 credits of core requirements including 3 credit hours of Aviation Mathematics and Physics course (AVT 1003) and 16 weeks of work placement.
 - b. Minimum of 18 credits of Math and Science course requirements.
 - c. General Studies requirements of 33 credits according to the General Studies breakdown.
2. Minimum CGPA of 2.00.
3. Successfully complete 60% of the GCAA license exams.

Course Credits

General Studies Courses

Required Credits: 33

English, Arabic or other Languages	15
Humanities or Arts: AES 1003 Emirati Studies	3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering	3
Natural Sciences: PHY 1103 Physics I	3
Social or Behavioral Sciences	9

Core Courses

Required Credits: 99

AVT 1003	Aviation Mathematics and Physics	3
AVT 2103	DC Electrical Fundamentals	3
AVT 2113	AC Electrical Fundamentals and Electrical Machines	3
AVT 2203	Workshop Practices and Safety	3
AVT 2213	Aircraft Materials	3
AVT 2223	Aircraft Hardware	3
AVT 2233	Maintenance Procedures and Abnormal Events	3
AVT 2243	Electrical Wiring Standards and Practices	3
AVT 2303	Aircraft Fundamentals and Basic Aerodynamics	3
AVT 2806	Work Placement I for Aviation	6
AVT 2902	Sophomore Design Project	2
AVT 3103	Electronic Fundamentals	3
AVT 3113	Digital Techniques Electronic Instrument Systems	3
AVT 3203	Maintenance Practices Workshop	3
AVT 3403	Human Factors	3
AVT 3413	Aviation Legislation	3
AVT 3703	Gas Turbine Engine I	3
AVT 3712	Gas Turbine Engine I Workshop	2
AVT 3723	Gas Turbine Engine II	3
AVT 3733	Propeller	3
AVT 3806	Work Placement II for Aviation	6
AVT 4503	Aircraft Flight Control and Structures	3
AVT 4513	Aircraft Conditioning and Oxygen	3
AVT 4523	Aircraft Electrical Power	3
AVT 4532	Aircraft Systems Workshop	2
AVT 4543	Aircraft Avionics Systems for Mechanical	3
AVT 4553	Aircraft Fuel and Passenger Systems	3
AVT 4563	Aircraft Protection Systems	3
AVT 4573	Aircraft Hydraulic and Landing Gear	3
AVT 4583	Aircraft Instrument and Lighting	3
AVT 4902	Capstone Design Project I	2
AVT 4911	Capstone Design Project II	1
EGR 1133	Design Thinking in Technology	3

Mathematics and Science Courses

Required Credits: 18

CHM 1103	Engineering Chemistry	3
MTH 1103	Pre-calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra and Differential Equations	3
PHY 1203	Physics II	3

<i>Total Required Credits</i>	<i>150</i>
<i>Maximum Duration of Study</i>	<i>6 years</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4 years</i>
<i>Program Code</i>	<i>BAVET</i>
<i>Major Code</i>	<i>AVE</i>

Diploma in Aviation Maintenance Engineering Technology: Airframe and Aeroengines (DAVET) Exit Option

License Requirement

After exiting the Aviation Maintenance Engineering Technology (Airframe and Aeroengines) program with the diploma, students could continue training for aviation maintenance licenses in accordance with GCAA regulations (CAR 66.25). The graduate would be required to complete an additional 10 modules in a self-study program, with the examinations carried out at HCT under the provisions of GCAA as an approved Examination Centre. The entire course must be completed within a 10 year period. Refer to www.gcaa.gov.ae (E-Publications – (CAR's-CAR Part II-Chapter 7)) for full details and specific information.

Program Educational Objectives

The Program Educational Objectives of the Diploma in Aviation Maintenance Engineering Technology (Airframe and Aeroengines) program are to:

1. Provide aviation graduates with the technical knowledge and skills required by the aviation industry to maintain a variety of aircraft systems to the highest standards.
2. Prepare graduates for a successful career as effective decision makers with strong communication and teamwork skills and an understanding of the global, ethical and social implications of the aviation industry and engineering profession.
3. Prepare graduates with a strong commitment to lifelong learning, continuing education and professional growth.
4. Provide graduates the commitment to contribute actively to achieving the regulatory authorities' mission.

Program Student Outcomes

Upon graduation, a HCT graduate in Diploma in Aviation Maintenance Engineering Technology (Airframe and Aeroengines) program should demonstrate:

- a. An ability to integrate and utilize basic theoretical and practical knowledge on mathematics, natural sciences and aviation maintenance engineering in the workplace.
- b. An ability to identify, explain, formulate and solve basic aviation maintenance engineering problems;
- c. An ability to apply the acquired basic theoretical and practical knowledge in accordance with regulations and manufacturer's instructions.
- d. A basic knowledge on the communal and environmental framework in which the aviation operations are conducted.
- e. An ability to use computer software, information and communication technologies at a level required for basic aviation maintenance.
- f. An ability to conduct standard tests and measurements.

- g. An ability to communicate effectively in writing, orally, and graphically.
- h. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- i. An understanding of and a commitment to address professional and ethical responsibilities
- j. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Diploma in Aviation Maintenance Engineering Technology (Airframe and Aeroengines) must successfully complete a minimum of 77 credits, as follows:

- a. Program major requirements of 38 credits including 3 credit hours of Aviation Mathematics and Physics course (AVT 1003) and 8 weeks of work placement.
- b. Math and Science requirements of 15 credits.
- c. General Studies requirements of 24 credits according to the General Studies breakdown.

Course Credits

Core Courses

Required Credits: 38

AVT 1003	Aviation Mathematics and Physics	3
AVT 2103	DC Electrical Fundamentals	3
AVT 2113	AC Electrical Fundamentals and Electrical Machines	3
AVT 2203	Workshop Practices and Safety	3
AVT 2213	Aircraft Materials	3
AVT 2223	Aircraft Hardware	3
AVT 2233	Maintenance Procedures and Abnormal Events	3
AVT 2243	Electrical Wiring Standards and Practices	3
AVT 2303	Aircraft Fundamentals and Basic Aerodynamics	3
AVT 2806	Work Placement I for Aviation	6
AVT 2902	Sophomore Design Project	2
EGN 1133	Design Thinking in Technology	3

Mathematics and Science Courses

Required Credits: 15

CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
PHY 1203	Physics II	3

Course Credits

General Studies Courses

Required Credits: 24

English, Arabic or other Languages	9
Humanities or Arts: AES 1003 Emirati Studies	3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering	3
Natural Sciences: PHY 1103 Physics I	3
Social or Behavioral Sciences	6

<i>Total Required Credits</i>	<i>77</i>
<i>Maximum Duration of Study</i>	<i>3 years</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>2 years</i>
<i>Program Code</i>	<i>DAVET</i>
<i>Major Code</i>	<i>AVE</i>

Recommended Sequence of Study

Bachelor of Aviation Maintenance Engineering Technology (Airframe and Aeroengines)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits:15			Required Credits:15		
LSC 1103	Academic Reading and Writing I	3	LSC 2103	Academic Reading and Writing II	3
LSS 1003	Life and Study Skills	3	LSS 1123	Basic Methods of Scientific Research and Development	3
PHY 1103	Physics I	3	PHY 1203	Physics II	3
EGN 1133	Design Thinking in Technology	3	MTH 1113	Statistics for Engineering	3
MTH 1103	Pre Calculus	3	MTH 1203	Calculus I	3
Year 1 Summer Semester			Year 2 Semester 4		
Required Credits:6			Required Credits:14		
AVT 1003	Aviation Mathematics and Physics	3	AVT 2113	AC Electrical Fundamentals and Electrical Machines	3
CHM 1103	Engineering Chemistry	3	AVT 2223	Aircraft Hardware	3
Year 2 Semester 3			Year 2 Summer Semester		
Required Credits:15			Required Credits:6		
AES 1013	Arabic Communications I	3	AVT 2806	Work Placement I for Aviation	6
AVT 2103	DC Electrical Fundamentals	3	Year 3 Semester 6		
AVT 2203	Workshop Practices and Safety	3	Required Credits: 15		
AVT 2213	Aircraft Materials	3	LSS 2403	Innovation and Entrepreneurship	3
AVT 2303	Aircraft Fundamentals and Basic Aerodynamics	3	AVT 3413	Aviation Legislation	3
Year 2 Summer Semester			Year 3 Semester 5		
Required Credits:6			Required Credits: 14		
AES 1003	Emirati Studies	3	AVT 3203	Maintenance Practices Workshop	3
MTH 2103	Calculus II	3	AVT 3103	Electronic Fundamentals	3
Year 3 Semester 5			Year 3 Summer Semester		
Required Credits: 14			Required Credits: 6		
AVT 3403	Human Factors	3	LSC 2183	English for Specific Purposes	3
AVT 3703	Gas Turbine Engine I	3	MTH 2503	Linear Algebra and Differential Equations	3
AVT 3712	Gas Turbine Engine I Workshop	2	Year 4 Semester 7		
Year 3 Summer Semester			Required Credits: 16		
Required Credits: 6			AVT 4503	Aircraft Flight Control and Structures	3
LSC 2183	English for Specific Purposes	3	AVT 4513	Aircraft Conditioning and Oxygen	3
MTH 2503	Linear Algebra and Differential Equations	3	AVT 4523	Aircraft Electrical Power	3
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 16			Required Credits: 16		
AVT 4532	Aircraft Systems Workshop	2	AVT 4553	Aircraft Fuel and Passenger Systems	3
AVT 4543	Aircraft Avionics Systems for Mechanical	3	AVT 4563	Aircraft Protection Systems	3
AVT 4902	Capstone Design Project I	2	AVT 4573	Aircraft Hydraulic and Landing Gear	3
Year 4 Summer Semester			Year 4 Summer Semester		
Required Credits: 6			Required Credits: 6		
AVT 3806	Work Placement II for Aviation	6	AVT 4583	Aircraft Instrument and Lighting	3
Year 4 Summer Semester			Year 4 Summer Semester		
Required Credits: 6			Required Credits: 6		
AVT 3806	Work Placement II for Aviation	6	AVT 4911	Capstone Design Project II	1
Year 4 Summer Semester			Year 4 Summer Semester		
Required Credits: 6			Required Credits: 6		
AVT 3806	Work Placement II for Aviation	6	AES 3003	Professional Arabic	3

Bachelor of Aviation Maintenance Engineering Technology: Avionics (BAAET)

Program Mission

Provide aviation graduates and professionals with the necessary knowledge, skills, attitude, and lifelong learning abilities to pursue excellence while meeting the international aviation standards to fulfil the needs of aviation community.

Program Description

The Bachelor of Aviation Maintenance Engineering Technology (BAAET) program articulates into the GCAA licensed outcome which is approved by the General Civil Aviation Authority (GCAA) UAE (CAR 147/02/2009). The program provides the graduates with excellent knowledge and skills to work effectively and professionally in the aviation community. Furthermore, it has the important element of broad education and continuous lifelong learning abilities.

Graduates can take positions in the aviation industry and can work individually or in teams to practically apply avionics maintenance skills and solutions with consideration of the industry regulations and ethics. Students will graduate with a Bachelor degree and after a further two years industry experience and meeting the General Civil Aviation Authority requirements they will have a license of category 'B2' (Avionics). They also have the option to exit the program with a diploma after completion of the second year (see diploma requirements and conditions stated below). Employment opportunities for aviation graduates within the UAE, Gulf region and worldwide are abundant and expanding. Employment opportunities include military operations, state commercial operations, private aviation operations and aviation supporting industries and logistics.

The program curriculum covers all avionics maintenance training modules required and licensed by the General Civil Aviation Authority (GCAA) and compatible with European Aviation Safety Agency (EASA). The program also has the main and important engineering courses and the General Studies courses which will prepare the students to be competent engineers and productive educated professionals. Graduates will be ready for positions as aviation engineers and technicians with the technical and managerial skills necessary to enter careers in aviation maintenance, management, and operations. Students will gain the required practical knowledge and skills through labs, practical assignments and work placements.

The curriculum aims to produce high-quality engineers known for productivity, timeliness, dedication, and competence in the workplace. Graduates have the ability to work logically, accurately and efficiently; to gather and use information effectively; and to continue enhancing their careers through lifelong learning. The program stresses

the effective use of technology, information resources and engineering tools. The program provides leadership qualities based on moral and ethical principles coupled with sound and rational judgment. Finally, the program is designed to prepare motivated students for graduate studies in Aviation Engineering and other related areas of professional practices.

Students will have the option to graduate with a Diploma in Aviation Maintenance Engineering Technology (Avionics) upon the successful completion of 77 credits inclusive of 8 weeks of Work Placement.

Program Educational Objectives

The Program Educational Objectives of the Bachelor of Aviation Maintenance Engineering Technology (Avionics) program are to:

1. Provide aviation graduates with the technical knowledge and skills required by the aviation industry to maintain a variety of aircraft systems to the highest standards.
2. Prepare graduates for a successful career as effective decision makers with strong communication and teamwork skills and an understanding of the global, ethical and social implications of the aviation industry and engineering profession.
3. Prepare graduates with a strong commitment to lifelong learning, continuing education and professional growth.
4. Provide graduates with leadership qualities and commitment to contribute actively to achieving the regulatory authorities' mission.

Program Student Outcomes

Upon graduation, a HCT graduate in Bachelor of Aviation Maintenance Engineering Technology (Avionics) program should demonstrate:

- a. An ability to integrate and utilize theoretical and practical knowledge on mathematics, natural sciences and avionics maintenance engineering to offer engineering solutions.
- b. An ability to identify, explain, formulate and solve avionics maintenance engineering problems; select and apply appropriate analytical methods and modeling techniques.
- c. An ability to apply the acquired comprehensive theoretical and practical knowledge in accordance with the national and international aviation authorities' regulations and manufacturer's instructions.
- d. A comprehensive knowledge on the forensic, communal and environmental framework in which the aviation operations are conducted.
- e. An ability to analyze a system, a system component or a process; utilize advanced design methods to meet the defined requirements under realistic constraints.
- f. An ability to identify and analyze problems, propose

solutions based on research, proof and results from different sources and measurements; develop appropriate corrective action.

- g. An ability to use computer software, information and communication technologies at a level required by aviation maintenance engineering technology.
- h. An understanding of the need for lifelong learning; an ability to learn new developments in science and technology, access information, review literature, and make conclusions.
- i. An ability to propose, build and lead team works in engineering projects related to avionics maintenance technology.
- j. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
- k. An ability to communicate effectively in writing, orally, and graphically and an ability to identify and use appropriate technical literature.
- l. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- m. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
- n. A knowledge of the impact of engineering technology solutions in a societal and global context.
- o. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Bachelor of Aviation Maintenance Engineering Technology (Avionics) degree must successfully complete the following requirements:

1. Minimum of 150 credits which are divided as follows:
 - a. Minimum of 99 credits of program core requirements including 3 credit hours of (AVT 1003) Aviation Mathematics and Physics course and 16 weeks of work placement.
 - b. Minimum of 18 credits of Math and science requirements.
 - c. General Studies requirements of 33 credits according to the General Studies breakdown and as advised in the study plan of the program.
2. Minimum CGPA of 2.00.
3. Successfully complete 60% of the GCAA license exams

Core Courses		
Required Credits: 99		
AVT 1003	Aviation Mathematics and Physics	3
AVT 2103	DC Electrical Fundamentals	3
AVT 2113	AC Electrical Fundamentals and Electrical Machines	3
AVT 2253	Workshop Practices and Safety for Avionics	3
AVT 2263	Aircraft Materials for Avionics	3
AVT 2273	Aircraft Hardware for Avionics	3
AVT 2283	Maintenance Procedures and Abnormal Events for Avionics	3
AVT 2293	Electrical Wiring Standards and Practices for Avionics	3
AVT 2303	Aircraft Fundamentals and Basic Aerodynamics	3
AVT 2806	Work Placement I for Aviation	6
AVT 2902	Sophomore Design Project	2
AVT 3102	Semiconductor Fundamentals	2
AVT 3123	Integrated Circuits and Servomechanisms	3
AVT 3133	Digital Techniques	3
AVT 3143	Electronic Instrument Systems	3
AVT 3403	Human Factors	3
AVT 3413	Aviation Legislation	3
AVT 3503	Aircraft Flight Control and Structures for Avionics	3
AVT 3513	Aircraft Instrument and Lighting for Avionics	3
AVT 3603	Propulsion	3
AVT 3806	Work Placement II for Aviation	6
AVT 4602	Aircraft Conditioning and Oxygen for Avionics	2
AVT 4613	Aircraft Radio and Navigation Systems	3
AVT 4623	Aircraft Electrical Power for Avionics	3
AVT 4633	Avionics Systems	3
AVT 4643	Aircraft Fuel and Passenger Systems for Avionics	3
AVT 4653	Aircraft Radar Systems	3
AVT 4663	Aircraft Protection Systems for Avionics	3
AVT 4673	Aircraft Hydraulic and Landing Gear for Avionics	3
AVT 4683	Aircraft Autoflight Systems	3
AVT 4902	Capstone Design Project I	2
AVT 4911	Capstone Design Project II	1
EGN 1133	Design Thinking in Technology	3

Mathematics and Science Courses		
Required Credits: 18		
CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra and Differential Equations	3
PHY 1203	Physics II	3

General Studies	
Required Credits: 33	
English, Arabic or other Languages	15
Humanities or Arts: AES 1003 Emirati Studies	3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering	3
Natural Sciences: PHY 1103 Physics I	3
Social or Behavioral Sciences	9

<i>Total Required Credits</i>	<i>150</i>
<i>Maximum Duration of Study</i>	<i>6 years</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4 years</i>
<i>Program Code</i>	<i>BAAET</i>
<i>Major Code</i>	<i>AAE</i>

Diploma in Aviation Maintenance Engineering Technology: Avionics (DAAET) Exit Option

License Requirement

After exiting the Aviation Maintenance Engineering Technology (Avionics) program with the diploma, students could continue training for aviation maintenance licenses in accordance with GCAA regulation (CAR 66.25). The graduate would be required to complete an additional 9 modules in a self-study program, with the examinations carried out at HCT under the provisions of GCAA as an approved Examination Centre. The entire course must be completed within a 10-year period. Refer to www.gcaa.gov.ae (E-Publications – CAR's-CAR Part II- Chapter 7) for full details and specific information.

Program Educational Objectives

The Program Educational Objectives of the Diploma of Aviation Maintenance Engineering Technology (Avionics) program are to:

1. Provide aviation graduates with the technical knowledge and skills required by the aviation industry to maintain a variety of aircraft systems to the highest standards.
2. Prepare graduates for a successful career as effective decision makers with strong communication and teamwork skills and an understanding of the global, ethical and social implications of the aviation industry and engineering profession.
3. Prepare graduates with a strong commitment to lifelong learning, continuing education and professional growth.
4. Provide graduates with the commitment to contribute actively to achieving the regulatory authorities' mission.

Program Student Outcomes

Upon graduation, a HCT graduate in Diploma in Aviation Maintenance Engineering Technology (Avionics) program should demonstrate:

- a. An ability to integrate and utilize basic theoretical and practical knowledge on mathematics, natural sciences and aviation maintenance engineering in the workplace.
- b. An ability to identify, explain, formulate and solve basic aviation maintenance engineering problems.
- c. An ability to apply the acquired basic theoretical and practical knowledge in accordance with regulations and manufacturer's instructions.
- d. A basic knowledge on the communal and environmental framework in which the aviation operations are conducted.
- e. An ability to use computer software, information and communication technologies at a level required for basic aviation maintenance.
- f. An ability to conduct standard tests and measurements.

- g. An ability to communicate effectively in writing, orally, and graphically.
- h. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- i. An understanding of and a commitment to address professional and ethical responsibilities.
- j. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Diploma in Aviation Maintenance Engineering Technology (Avionics) must successfully complete a minimum of 77 credits, as follows:

- a. Program major requirements of 38 credits including 3 credit hours of (AVT 1003) Aviation Mathematics and Physics course and 8 weeks of work placement.
- b. Math and Science requirements of 15 credits.
- c. General Studies requirements of 24 credits according to the General Studies breakdown.

		Course Credits
Core Courses		
Required Credits: 38		
AVT 1003	Aviation Mathematics and Physics	3
AVT 2103	DC Electrical Fundamentals	3
AVT 2113	AC Electrical Fundamentals and Electrical Machines	3
AVT 2253	Workshop Practices and Safety for Avionics	3
AVT 2263	Aircraft Materials for Avionics	3
AVT 2273	Aircraft Hardware for Avionics	3
AVT 2283	Maintenance Procedures and Abnormal Events for Avionics	3
AVT 2293	Electrical Wiring Standards and Practices for Avionics	3
AVT 2303	Aircraft Fundamentals and Basic Aerodynamics	3
AVT 2806	Work Placement I for Aviation	6
AVT 2902	Sophomore Design Project	2
EGN 1133	Design Thinking in Technology	3

		Course Credits
Mathematics and Science Courses		
Required Credits: 15		
CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
PHY 1203	Physics II	3

		Course Credits
General Studies Courses		
Required Credits: 24		
English, Arabic or other Languages		9
Humanities or Arts: AES 1003 Emirati Studies		3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering		3
Natural Sciences: PHY 1103 Physics I		3
Social or Behavioral Sciences		6
<i>Total Required Credits</i>		<i>77</i>
<i>Maximum Duration of Study</i>		<i>3 years</i>
<i>Cost Recovery Program</i>		<i>No</i>
<i>Minimum Duration of Study</i>		<i>2 years</i>
<i>Program Code</i>		<i>DAAET</i>
<i>Major Code</i>		<i>AAE</i>

Recommended Sequence of Study

Bachelor of Aviation Maintenance Engineering Technology (Avionics)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
LSC 1103	Academic Reading and Writing I	3	LSC 2103	Academic Reading and Writing II	3
LSS 1003	Life and Study Skills	3	LSS 1123	Basic Methods of Scientific Research and Development	3
PHY 1103	Physics I	3	PHY 1203	Physics II	3
EGN 1133	Design Thinking in Technology	3	MTH 1113	Statistics for Engineering	3
MTH 1103	Pre Calculus	3	MTH 1203	Calculus I	3
Year 1 Summer Semester			Year 2 Semester 4		
Required Credits: 6			Required Credits: 14		
AVT 1003	Aviation Mathematics and Physics	3	AVT 2113	AC Electrical Fundamentals and Electrical Machines	3
CHM 1103	Engineering Chemistry	3	AVT 2273	Aircraft Hardware for Avionics	3
Year 2 Semester 3			Year 2 Summer Semester		
Required Credits: 15			Required Credits: 6		
AES 1013	Arabic Communications I	3	AVT 2806	Work Placement I for Aviation	6
AVT 2103	DC Electrical Fundamentals	3	Year 3 Semester 6		
AVT 2253	Workshop Practices and Safety for Avionics	3	Required Credits: 15		
AVT 2263	Aircraft Materials for Avionics	3	LSS 2403	Innovation and Entrepreneurship	3
AVT 2303	Aircraft Fundamentals and Basic Aerodynamics	3	AVT 3413	Aviation Legislation	3
Year 2 Summer Semester			Year 3 Semester 5		
Required Credits: 6			Required Credits: 14		
AES 1003	Emirati Studies	3	AVT 3403	Human Factors	3
MTH 2103	Calculus II	3	AVT 3102	Semiconductor Fundamentals	2
Year 3 Semester 5			Year 3 Summer Semester		
Required Credits: 14			Required Credits: 6		
AVT 3123	Integrated Circuits and Servomechanisms	3	LSC 2183	English for Specific Purposes	3
AVT 3133	Digital Techniques	3	MTH 2503	Linear Algebra and Differential Equations	3
AVT 3143	Electronic Instrument Systems	3	Year 4 Semester 7		
Year 3 Summer Semester			Required Credits: 16		
Required Credits: 6			AVT 4602	Aircraft Conditioning and Oxygen for Avionics	2
LSC 2183	English for Specific Purposes	3	AVT 4613	Aircraft Radio and Navigation Systems	3
MTH 2503	Linear Algebra and Differential Equations	3	AVT 4623	Aircraft Electrical Power for Avionics	3
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 16			Required Credits: 16		
AVT 4633	Avionics Systems	3	AVT 4653	Aircraft Radar Systems	3
AVT 4643	Aircraft Fuel and Passenger Systems for Avionics	3	AVT 4663	Aircraft Protection Systems for Avionics	3
AVT 4902	Capstone Design Project I	2	AVT 4673	Aircraft Hydraulic and Landing Gear for Avionics	3
Year 4 Summer Semester			Year 4 Summer Semester		
Required Credits: 6			Required Credits: 6		
AVT 3806	Work Placement II for Aviation	6	AVT 4683	Aircraft Autoflight Systems	3
Year 4 Summer Semester			Year 4 Summer Semester		
Required Credits: 6			Required Credits: 6		
AVT 3806	Work Placement II for Aviation	6	AVT 4911	Capstone Design Project II	1
Year 4 Summer Semester			Year 4 Summer Semester		
Required Credits: 6			Required Credits: 6		
AVT 3806	Work Placement II for Aviation	6	AES 3003	Professional Arabic	3

Faculty

ABU DHABI MEN'S COLLEGE

Anthony Kukas, Advanced Diploma in Management, TAFE NSW, Riverina Institute

Eleni - Eleftheria Kamperi, Bachelor Aircraft Technology, Technological Education Institute, Chalkida

Eric Abalayan, Bachelor Aeronautical Engineering, Mats College of Technology

Evangelos Papageorgiou, PhD Aeronautical Engineering, University of Southampton

John Paproth, Diploma Aircraft Maintenance Technology, Royal Australian Air Force

Mahmoud Almawali, Bachelor Mechanical Engineering, Rochville University

Michael Crawley, Bachelor Adult and Vocational Education, University of Tasmania

Michael Ledesma, Bachelor Aeronautical Engineering, Mats College of Technology

Peter Fraser, Bachelor Aviation, University of Western Sydney

Richard Bonner, Diploma Vocational Training Systems, Royal Australian Air Force

Robert Cambrensis, Certificate CELTA, University of Wollongong

Serdar Dalkilic, PhD Aviation, Anadolu University

Tariq Shokair, Bachelor Aircraft Maintenance Technology, Northrope University

Waleed Bataineh, Certificate Technical Management, Prince Faisal Technical College

DUBAI MEN'S COLLEGE

Aziz Almahadin, PhD Aeronautical Engineering, University of Hertfordshire

Colin Signorino, Diploma Aircraft Engineering Technology, Royal Australian Air Force

Douglas Lightle, Masters Aeronautical Science, Embry-Riddle Aero University

Frank Oval, Bachelor Technical Management, Embry-Riddle Aero University

Islam Zaki, Masters Aviation Management, The University of Newcastle

John Price, Bachelor Information Technology, University of Phoenix

Mohammad Qutaishat, Masters Production and Operations Management, Hashemite University

Salvi Salvacion, Bachelor Aeronautical Engineering, Patts College of Aeronautics

Department of Chemical Engineering Technology (CHET)

Bachelor of Chemical Engineering Technology (BCHET)

Program Mission

The Bachelor of Chemical Engineering Technology program prepares graduates to be successful in the technical and managerial fields of Chemical Engineering Technology in order to be great leaders in their profession. The program also teaches them to embrace innovation and discovery, strive for lifelong learning, and constantly seek professional development.

Program Description

The Bachelor of Chemical Engineering Technology program provides an excellent broad education with a focused area of specialization options to cater to the global and local industries.

The Bachelor of Chemical Engineering Technology curriculum covers the laws of chemistry, physics, and mathematics which form the basis of many industrial processes in areas such as energy, oil and gas, chemical processing, etc. The program prepares students for positions as engineers with the technical and managerial skills necessary to enter careers in the design, manufacturing, operation, and maintenance of chemical processes. Students will gain practical knowledge in heat and mass transfer in plants and process control design projects. The Bachelor of Chemical Engineering Technology curriculum produces high-quality engineers known for productivity, timeliness, dedication, and competence in the workplace.

Graduates typically have strengths in applied design, development, and implementation of chemical engineering systems. They have the ability to work logically, accurately and efficiently; to gather and use information effectively; and to continue enhancing their careers through lifelong learning. The program stresses the effective use of technology, information resources and engineering tools. The program instills leadership qualities based on moral and ethical principles coupled with sound and rational judgment. Finally, the program is designed to prepare interested students for graduate studies in Chemical Engineering Technology and other related areas of professional practice.

Students will have the option to graduate with a Diploma in Chemical Engineering Technology upon the successful completion of 81 credits inclusive of the 8 week Work Placement.

Program Educational Objectives

The Program Educational Objectives of the Bachelor of Chemical Engineering Technology program are to:

1. Provide chemical engineering professionals with the technical knowledge and skills required by the industry to perform to highest level of industry standards.
2. Prepare graduates for a successful career as effective decision makers with strong communication and teamwork skills and an understanding of the global, ethical and social implications of the industry and engineering profession.
3. Prepare graduates with strong commitment and strategic mindset to lifelong learning, continuing education, and professional growth.
4. Prepare graduates with leadership qualities and commitment to contribute actively in achieving Abu Dhabi Vision 2030.

Program Student Outcomes

Upon graduation, a HCT graduate in Bachelor of Chemical Engineering Technology should demonstrate:

- a. An ability to select and apply the knowledge, techniques, skills, and modern tools of chemical engineering to broadly-defined engineering technology activities.
- b. An ability to select and apply a knowledge of mathematics, science, engineering, and technology to chemical engineering technology problems that require the application of principles and applied procedures or methodologies.
- c. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
- d. An ability to design systems, components, or processes for broadly-defined chemical engineering technology problems appropriate to program educational objectives.
- e. An ability to function effectively as a member or leader on a technical team.
- f. An ability to identify, analyze, and solve broadly-defined chemical engineering technology problems.
- g. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- h. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- i. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
- j. A knowledge of the impact of engineering technology solutions in a societal and global context.
- k. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Bachelor of Chemical Engineering Technology degree must successfully complete the following requirements:

1. Minimum of 146 credits which are divided as follows:
 - a. Minimum of 77 credits of program core requirements including 16 weeks of work placement
 - b. Minimum of 15 credits of major electives.
 - c. Minimum of 21 credits of Math and Science course requirements
 - d. General Studies requirements of 33 credits according to the General Studies breakdown.
2. Minimum CGPA of 2.00.

		Course Credits
Core Courses		
Required Credits: 80		
CHE 2113	Applied Chemistry	3
CHE 2123	Analytical Chemistry	3
CHE 2133	Organic Chemistry	3
CHE 2202	Chemical Engineering Principles I	2
CHE 2213	Chemical Engineering Principles II	3
CHE 2253	Materials and Corrosion	3
CHE 2413	Oil and Gas Processing Technologies	3
CHE 2422	Petroleum Chemistry Testing	2
CHE 2453	Fluid Mechanics	3
CHE 2903	Sophomore Design Project	3
CHE 3313	Chemical Engineering Thermodynamics	3
CHE 3323	Mass Transfer	3
CHE 3403	Chemical Heat Transfer	3
CHE 3413	Unit Operation 1	3
CHE 3513	Equipment and Plant Design	3
CHE 3613	Chemical Reaction Engineering	3
CHE 4613	Chemical Engineering Modelling and Simulation	3
CHE 4623	Chemical Process Control	3
CHE 4902	Capstone Design Project I	2
CHE 4912	Capstone Design Project II	2
EGN 1133	Design Thinking in Technology	3
EGN 2712	Applied Programming for Engineers	2
EGN 2806	Work Placement I	6
EGN 3012	Project Management	2
EGN 3212	Economics for Engineering	2
EGN 3806	Work Placement II	6
ELE 2153	Electrical Engineering Fundamentals	3

Major Elective Courses		
Required Credits: 12		
CHE 4293	Production Engineering (Offshore)	3
CHE 4403	Gas Processing	3
CHE 4413	Chemical Process HAZOP and Risk Analysis	3
CHE 4423	Optimization and Application in Refinery	3
CHE 4433	Petroleum and Petrochemical Processing	3
CHE 4443	Industrial Water and Effluent Treatment	3
CHE 4863	Special Topics in Chemical Engineering	3
CHE 4893	Directed Study	3

Course Credits

Mathematics and Science Courses		
Required Credits: 21		
CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra and Differential Equations	3
MTH 3013	Calculus III	3
PHY 1203	Physics II	3

General Studies	
Required Credits: 33	
English, Arabic or other Languages	15
Humanities or Arts: AES 1003 Emirati Studies	3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering	3
Natural Sciences: PHY 1103 Physics I	3
Social or Behavioral Sciences	9

<i>Total Required Credits</i>	<i>146</i>
<i>Maximum Duration of Study</i>	<i>6 years</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4 years</i>
<i>Program Code</i>	<i>BCHET</i>
<i>Major Code</i>	<i>CHE</i>

Diploma in Chemical Engineering Technology (DCHET) Exit Option

Program Educational Objectives

The Program Educational Objectives of the Diploma in Chemical Engineering Technology program are to:

1. Provide chemical engineering professionals with the technical knowledge and skills required by the industry to perform to industry standards.
2. Prepare graduates for a successful career with strong communication and teamwork skills, work ethics in the practice of engineering profession.
3. Prepare graduates with strong commitment to lifelong learning, continuing education, and professional growth.

Program Student Outcomes

Upon graduation, a HCT graduate in Diploma in Chemical Engineering Technology should demonstrate:

- a. An ability to apply the knowledge, techniques, skills, and modern tools of chemical engineering to narrowly defined engineering technology activities.
- b. An ability to apply a knowledge of mathematics, science, engineering, and technology to chemical engineering technology problems that require limited application of principles but extensive practical knowledge.
- c. An ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments.
- d. An ability to function effectively as a member of a technical team.
- e. An ability to identify, analyze, and solve narrowly defined chemical engineering technology problems.
- f. An ability to apply written, oral, and graphical communication in both technical and non-technical environments and an ability to identify and use appropriate technical literature.
- g. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- h. An understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity.
- i. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Diploma in Chemical Engineering Technology must successfully complete the following minimum requirements:

1. A minimum of 81 credits, as follows:
 - 42 credits of major requirements, including work placement for 8 weeks.
 - Minimum of 15 credits of Math and Science requirements.
 - Minimum of 24 credits of General Studies requirements according to the General Studies breakdown.
2. A minimum CGPA of 2.00.

Course Credits

Core Courses		
Required Credits: 42		
CHE 2113	Applied Chemistry	3
CHE 2123	Analytical Chemistry	3
CHE 2133	Organic Chemistry	3
CHE 2202	Chemical Engineering Principles I	2
CHE 2213	Chemical Engineering Principles II	3
CHE 2253	Materials and Corrosion	3
CHE 2413	Oil and Gas Processing Technologies	3
CHE 2422	Petroleum Chemistry Testing	2
CHE 2903	Sophomore Design Project	3
EGN 1133	Design Thinking in Technology	3
EGN 2806	Work Placement I	6
EGN 3012	Project Management	2
ELE 2153	Electrical Engineering Fundamentals	3
MTE 2403	Thermofluid Systems	3
Mathematics and Science Courses		
Required Credits: 15		
CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
PHY 1203	Physics II	3
General Studies Courses		
Required Credits: 24		
English, Arabic or other Languages		9
Humanities or Arts : AES 1003 Emirati Studies		3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering		3
Natural Sciences: PHY 1103 Physics I		3
Social or Behavioral Sciences		6
<i>Total Required Credits</i>		<i>81</i>
<i>Maximum Duration of Study</i>		<i>3 years</i>
<i>Cost Recovery Program</i>		<i>No</i>
<i>Minimum Duration of Study</i>		<i>2 years</i>
<i>Program Code</i>		<i>DCHET</i>
<i>Major Code</i>		<i>CHE</i>

Recommended Sequence of Study

Bachelor of Chemical Engineering Technology

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits:15			Required Credits:15		
LSC 1103	Academic Reading and Writing I	3	LSC 2103	Academic Reading and Writing II	3
LSS 1003	Life and Study Skills	3	MTH 1113	Statistics for Engineering	3
PHY 1103	Physics I	3	MTH 1203	Calculus I	3
EGN 1133	Design Thinking in Technology	3	PHY 1203	Physics II	3
MTH 1103	Pre Calculus	3	LSS 1123	Basic Methods of Scientific Research and Development	3
Year 1 Summer Semester			Year 2 Semester 4		
Required Credits:6			Required Credits:17		
AES 1013	Arabic Communications	3	CHE 2213	Chemical Engineering Principles II	3
CHM 1103	Engineering Chemistry	3	CHE 2133	Organic Chemistry	3
Year 2 Semester 3			Year 2 Summer Semester (Diploma)		
Required Credits:17			Required Credits: 6		
AES 1003	Emirati Studies	3	EGN 2806	Work Placement I	6
CHE 2202	Chemical Engineering Principles I	2	Year 2 Summer Semester (Bachelor)		
ELE 2153	Electrical Engineering Fundamentals	3	Required Credits: 6		
CHE 2113	Applied Chemistry	3	EGN 2806	Work Placement I	6
CHE 2123	Analytical Chemistry	3	Year 3 Semester 5		
CHE 2253	Materials and Corrosion	3	Required Credits: 16		
Year 2 Summer Semester (Diploma)			Year 3 Semester 6		
Required Credits: 5			Required Credits: 15		
EGN 3012	Project Management	2	CHE 3323	Mass Transfer	3
MTE 2403	Thermofluid Systems	3	CHE 3413	Unit Operation 1	3
Year 2 Summer Semester (Bachelor)			Year 4 Semester 7		
Required Credits: 6			Required Credits: 13		
MTH 2503	Linear Algebra and Differential Equations	3	CHE 4613	Chemical Engineering Modelling and Simulation	3
CHE 2453	Fluid Mechanics	3	CHE 4902	Capstone Design Project I	2
Year 3 Semester 5			Year 4 Semester 8		
Required Credits: 16			Required Credits: 14		
CHE 3313	Chemical Engineering Thermodynamics	3	CHE 4623	Chemical Process Control	3
MTH 3013	Calculus III	3	CHE 4912	Capstone Design Project II	2
EGN 3012	Project Management	2	CHE 4xx3	Major Elective	3
LSC 2183	English for Specific Purposes	3	CHE 4xx3	Major Elective	3
EGN 2712	Applied Programming for Engineers	2	CHE 4xx3	Major Elective	3
CHE 3403	Chemical Heat Transfer	3	AES 3003	Professional Arabic	3
Year 3 Summer Semester			Year 4 Semester 8		
Required Credits: 6			Required Credits: 14		
EGN 3806	Work Placement II	6	Year 4 Semester 8		
Year 4 Semester 7			Required Credits: 14		
Required Credits: 13			Required Credits: 14		
CHE 4613	Chemical Engineering Modelling and Simulation	3	CHE 4623	Chemical Process Control	3
CHE 4902	Capstone Design Project I	2	CHE 4912	Capstone Design Project II	2
CHE 4xx3	Major Elective	3	CHE 4xx3	Major Elective	3
CHE 4xx3	Major Elective	3	CHE 4xx3	Major Elective	3
EGN 3212	Economics for Engineering	2	AES 3003	Professional Arabic	3

Faculty

ABU DHABI MEN'S COLLEGE

- Abdul Rauf**, PhD Chemical Metallurgy, Catholic University of Leuven
El Awad Osman, Masters Chemical Engineering, University of Bradford
Eugene O'Malley, Masters Instrumental Analysis, Dublin City University
Luis Palamiano, Masters Environmental Engineering, National University of Singapore
Marie Loridon, PhD Organic and Bio-organic Chemistry, University Pierre and Marie Curie
Meegalla Chandraratne, PhD Computer Vision Bio Process, Lincoln University
Muhammad Waqas Anjum, PhD Bioscience Engineering, KU Leuven
Thomas Adebayo, PhD Petroleum Engineering, Covenant University
Zin-Eddine Dadach, PhD Chemical Engineering, Universite Laval

WESTERN REGION COLLEGES

- Abdelrahim Minalla**, Masters Chemical Engineering, San Jose State University
Amjad Shaikh, PhD Chemical Engineering, University of Sheffield
Kamal Al-Malah, PhD Chemical Engineering, Oregon State University
Padmaja Vootla, Masters Environmental Engineering, Nagpur University
Sathiyamoorthy Manickkam, Masters Chemical Engineering, Bharathidasan University

Department of Civil Engineering Technology (CVET)

Bachelor of Civil Engineering Technology (BCVET)

Program Mission

Working in partnership with industry, the Civil Engineering Technology Program provides quality education that prepares innovative engineers capable of serving the community and fulfilling personal ambitions with excellence.

Program Description

The Bachelor of Civil Engineering Technology program covers different streams in Civil Engineering including planning and design of buildings, bridges, transportation systems, water resources and supply, with particular attention to protection of the environment. It prepares students for positions as engineers with the technical and managerial skills necessary to enter careers in planning, design, construction, operation and maintenance of infrastructure in a sustainable environment. Civil Engineering Technology provides an excellent broad education with specialized areas to serve the needs of the global UAE industry.

The curriculum produces high-quality engineers known for productivity, professionalism, and competence in the workplace. Graduates will have the ability to analyze and design systems, specify project methods and materials, perform cost estimates and analyses, and manage technical tasks in support of both public and private sector organizations in civil engineering construction.

The graduates will have the ability to work professionally and efficiently, and to gather and use information effectively. The program instills leadership qualities based on moral and ethical principles coupled with sound and rational judgment. The program stresses the effective use of technology, information resources and engineering tools. Additionally, the program is designed to prepare students for graduate studies in Civil Engineering Technology and other areas of professional practice.

This program offers elective concentrations in:

- **Structures Engineering**
- **Water and Environmental Engineering**
- **Transportation Engineering**

Students will have the option to graduate with a Diploma in Civil Engineering Technology upon the successful completion of 79 credits inclusive of the 8 week Work Placement.

Program Educational Objectives

The Program Educational Objectives of the Bachelor of Civil Engineering Technology Program are to provide graduates:

1. With the technical knowledge and skills required by the industry to professionally develop, design, construct, operate, and maintain projects in areas of the built environment and global infrastructures.
2. Equipped for lifelong learning, professional development, and adhering to international Code of Ethics.
3. Capable to engage in sustainable activities through community and work-based opportunities.
4. With effective leadership, team building, and communication skills.

Program Student Outcomes

Upon graduation, a HCT graduate in Bachelor of Civil Engineering Technology should demonstrate:

- a. An ability to select and apply the knowledge, techniques, skills, and modern tools of civil engineering to broadly-defined engineering technology activities.
- b. An ability to select and apply a knowledge of mathematics, science, engineering, and technology to civil engineering technology problems that require the application of principles and applied procedures or methodologies.
- c. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
- d. An ability to design systems, components, or processes for broadly-defined civil engineering technology problems appropriate to program educational objectives.
- e. An ability to function effectively as a member or leader on a technical team.
- f. An ability to identify, analyze, and solve broadly-defined civil engineering technology problems.
- g. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- h. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- i. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
- j. A knowledge of the impact of engineering technology solutions in a societal and global context.
- k. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Bachelor of Civil Engineering Technology degree must successfully complete the following requirements:

1. Minimum of 146 credits which are divided as follows:
 - a. Major requirements of 77 credits as specified by program core requirements.
 - b. Work placement I and II: 8 weeks for each work placement.
 - c. Elective requirement of 15 credits.
 - d. Minimum of 21 credits of Math and Science course requirements
 - e. General Studies requirements of 33 credits according to the General Studies breakdown.
2. Minimum CGPA of 2.00.

		Course Credits
Core Courses		
Required Credits: 77		
CVE 2001	Applied Drafting and CAD: Civil	1
CVE 2013	CAD tools in Civil Engineering	3
CVE 2103	Site Surveying	3
CVE 2113	Quantity Surveying and Estimating	3
CVE 2203	Engineering Mechanics	3
CVE 2213	Strength of Materials	3
CVE 2303	Soil Mechanics	3
CVE 2403	Fluid Mechanics and Hydraulics	3
CVE 2603	Construction Materials	3
CVE 2613	Civil Engineering Construction	3
CVE 2903	Sophomore Design Project	3
CVE 3203	Structural Analysis	3
CVE 3303	Highway Engineering	3
CVE 3403	Water Resources and Supply	3
CVE 3503	Foundation Engineering	3
CVE 3513	Concrete Design I	3
CVE 4413	Environmental Engineering	3
CVE 4503	Steel Design	3
CVE 4902	Capstone Design Project I	2
CVE 4912	Capstone Design Project II	2
EGN 1133	Design Thinking in Technology	3
EGN 2712	Applied Programming for Engineers	2
EGN 2806	Work Placement I	6
EGN 3012	Project Management	2
EGN 3212	Economics for Engineering	2
EGN 3806	Work Placement II	6
General Studies		
Required Credits: 33		
English, Arabic or other Languages		15
Humanities or Arts: AES 1003 Emirati Studies		3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering		3
Natural Sciences: PHY 1103 Physics I		3
Social or Behavioral Sciences		9

		Course Credits
Major Elective Courses		
Required Credits: 15		
Structures (STR)		
CVE 4513	Concrete Design II	3
CVE 4523	Steel Design II	3
CVE 4533	Pre-stressed Concrete Design	3
CVE 4603	Construction Contract Management	3
CVE 4613	Concrete Technology	3
CVE 4803	Special Topics in Civil Engineering	3
CVE 4893	Directed Study	3
Water and Environmental (WAE)		
CVE 4403	Waste Water Engineering	3
CVE 4423	Solid Waste Management	3
CVE 4433	Sustainability in Civil Engineering	3
CVE 4443	Coastal Engineering	3
CVE 4453	Environmental Regulatory Compliance and Public Policy	3
CVE 4463	Green Buildings	3
CVE 4803	Special Topics in Civil Engineering	3
CVE 4893	Directed Study	3
Transportation (TRN)		
CVE 4303	Traffic Engineering	3
CVE 4313	Urban Transportation	3
CVE 4323	Transportation Planning	3
CVE 4333	GIS Applications in Civil Engineering	3
CVE 4343	Bridge Engineering	3
CVE 4353	Road Design and Construction	3
CVE 4803	Special Topics in Civil Engineering	3
CVE 4893	Directed Study	3
Mathematics and Science Courses		
Required Credits: 21		
CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra and Differential Equations	3
MTH 3013	Calculus III	3
PHY 1203	Physics II	3
<i>Total Required Credits</i>		<i>146</i>
<i>Maximum Duration of Study</i>		<i>6 years</i>
<i>Cost Recovery Program</i>		<i>No</i>
<i>Minimum Duration of Study</i>		<i>4 years</i>
<i>Program Code</i>		<i>BCVET</i>
<i>Major Code</i>		<i>CVE</i>

Diploma in Civil Engineering Technology (DCVET) Exit Option

Program Educational Objectives

The Program Educational Objectives of the Diploma in Civil Engineering Technology Program are to provide graduates:

1. With the technical knowledge and skills required by the industry to professionally develop, operate, and maintain projects in areas of the built environment and global infrastructures.
2. Equipped for lifelong learning, professional development, and adhering to international Code of Ethics.
3. Capable to engage in sustainable activities through community and work-based opportunities.
4. With team building and communication skills.

Program Student Outcomes

Upon graduation, a HCT graduate in Diploma in Civil Engineering Technology should demonstrate:

- a. An ability to apply the knowledge, techniques, skills, and modern tools of Civil Engineering to narrowly defined engineering technology activities.
- b. An ability to apply a knowledge of mathematics, science, engineering, and technology to Civil Engineering technology problems that require limited application of principles but extensive practical knowledge.
- c. An ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments.
- d. An ability to function effectively as a member of a technical team;
- e. An ability to identify, analyze, and solve narrowly defined Civil Engineering technology problems.
- f. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- g. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- h. An understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity.
- i. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Diploma in Civil Engineering Technology must successfully complete the following minimum requirements:

1. A minimum of 79 credits, as follows:
 - 40 credits of major requirements, including work placement for 8 weeks
 - Minimum of 15 credits of Math and science requirements
 - Minimum of 24 credits in General Studies requirements according to the General Studies breakdown.
2. A minimum CGPA of 2.00.

Course Credits

Core Courses

Required Credits: 40

CVE 2001	Applied Drafting and CAD: Civil	1
CVE 2013	CAD tools in Civil Engineering	3
CVE 2103	Site Surveying	3
CVE 2113	Quantity Surveying and Estimating	3
CVE 2203	Engineering Mechanics	3
CVE 2213	Strength of Materials	3
CVE 2303	Soil Mechanics	3
CVE 2403	Fluid Mechanics and Hydraulics	3
CVE 2603	Construction Materials	3
CVE 2613	Civil Engineering Construction	3
CVE 2903	Sophomore Design Project	3
EGN 1133	Design Thinking in Technology	3
EGN 2806	Work Placement I	6

Mathematics and Science Courses

Required Credits: 15

CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
PHY 1203	Physics II	3

General Studies

Required Credits: 24

English, Arabic or other Languages	9
Humanities or Arts	3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering	3
Natural Sciences: PHY 1103 Physics I	3
Social or Behavioral Sciences	6

Total Required Credits	79
Maximum Duration of Study	3 years
Cost Recovery Program	No
Minimum Duration of Study	2 years
Program Code	DCVET
Major Code	CVE

Recommended Sequence of Study

Bachelor of Civil Engineering Technology

Course Code	Course Title	Course Credits
Year 1 Semester 1		
Required Credits: 15		
LSC 1103	Academic Reading and Writing I	3
LSS 1003	Life and Study Skills	3
PHY 1103	Physics I	3
EGN 1133	Design Thinking in Technology	3
MTH 1103	Pre Calculus	3
Year 1 Summer Semester		
Required Credits: 6		
AES 1013	Arabic Communications I	3
CHM 1103	Engineering Chemistry	3
Year 2 Semester 3		
Required Credits: 16		
AES 1003	Emirati Studies	3
CVE 2001	Applied Drafting and CAD: Civil	1
CVE 2603	Construction Materials	3
CVE 2203	Engineering Mechanics	3
CVE 2403	Fluid Mechanics and Hydraulics	3
MTH 2103	Calculus II	3
Year 2 Summer Semester		
Required Credits: 6		
CVE 2113	Quantity Surveying and Estimating	3
CVE 2013	CAD tools in Civil Engineering	3
Year 3 Semester 5		
Required Credits: 15		
LSC 2183	English for Specific Purposes	3
MTH 2503	Linear Algebra and Differential Equations	3
CVE 3203	Structural Analysis	3
CVE 3403	Water Resources and Supply	3
CVE 3503	Foundation Engineering	3
Year 3 Summer Semester		
Required Credits: 6		
EGN 3806	Work Placement II	6
Year 4 Semester 7		
Required Credits: 16		
EGN 3212	Economics for Engineering	2
CVE 4902	Capstone Design Project I	2
CVE 4XX3	Major Elective	3
CVE 4XX3	Major Elective	3
CVE 4XX3	Major Elective	3
AES 3003	Professional Arabic	3

Course Code	Course Title	Course Credits
Year 1 Semester 2		
Required Credits: 15		
LSC 2103	Academic Reading and Writing II	3
MTH 1113	Statistics for Engineering	3
MTH 1203	Calculus I	3
PHY 1203	Physics II	3
LSS 1123	Basic Methods of Scientific Research and Development	3
Year 2 Semester 4		
Required Credits: 15		
CVE 2303	Soil Mechanics	3
CVE 2213	Strength of Materials	3
CVE 2103	Site Surveying	3
CVE 2903	Sophomore Design Project	3
CVE 2613	Civil Engineering Construction	3
Year 2 Summer Semester		
Required Credits: 6		
EGN 2806	Work Placement I	6
Year 3 Semester 6		
Required Credits: 16		
CVE 3303	Highway Engineering	3
EGN 2712	Applied Programing for Engineers	2
MTH 3013	Calculus III	3
EGN 3012	Project Management	2
CVE 3513	Concrete Design I	3
LSS 2403	Innovation and Entrepreneurship	3
Year 4 Semester 8		
Required Credits: 14		
CVE 4912	Capstone Design Project II	2
CVE 4413	Environmental Engineering	3
CVE 4503	Steel Design	3
CVE 4XX3	Major Elective	3
CVE 4XX3	Major Elective	3

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Samir Zaki Janho, Masters Civil Engineering, The University of Kansas

Thomas Riordan, Masters Business Administration, University of Greenwich

Department of Electrical Engineering Technology (ELET)

Bachelor of Electrical Engineering Technology (BELET)

Program Mission

The Electrical Engineering Technology (ELET) program provides highly qualified Electrical Engineers with state of the art knowledge, technical and leadership skills. The program also teaches them to embrace innovation and discovery, strive for lifelong learning, and constantly seek professional development to best serve the Electrical Engineering profession.

Program Description

The Bachelor of Electrical Engineering Technology program provides an excellent broad education with a focused area of specializations options to cater for the global UAE industry. The program graduates are trained to support power generation, transmission, distribution, and control of electric energy systems and related equipment. HCT Electrical engineers are trained to use state of the art software and hardware to rapidly prototype and test potential product design. They gain experience in circuits, semiconductor devices, digital systems, programming, microcontrollers, power systems, industrial instrumentation, and system control.

The Bachelor of Electrical Engineering Technology curriculum produces high-quality engineers known for productivity, timeliness, dedication, and competence in the workplace. Graduates have the ability to work logically, accurately and efficiently; to gather and use information effectively; and to continue enhancing their careers through lifelong learning. The program stresses the effective use of technology, information resources and engineering tools. The program instills leadership qualities based on moral and ethical principles coupled with sound and rational judgment. Finally, the program is designed to prepare interested students for graduate studies in electrical, electronics, communication and control engineering and other areas of professional practice.

This program offers elective concentrations in:

Power Engineering Technology

Communication Engineering Technology

Electronics Engineering Technology

Control and Instrumentation Engineering Technology

Students will have the option to graduate with a Diploma in Electrical Engineering Technology upon the successful completion of 80 credits inclusive of the 8 week Work Placement.

Program Educational Objectives

The Program Educational Objectives of the Bachelor of Electrical Engineering Technology program are to:

- 1- Provide electrical engineering professionals with the technical knowledge and skills required by the industry to develop, design, and maintain electrical systems to highest level of industry standards.
- 2- Prepare graduates for a successful career as effective decision makers with strong communication and teamwork skills and an understanding of the global, ethical and social implications of the industry and Electrical Engineering profession.
- 3- Provide graduates with strong commitment to lifelong learning, continuing education, and professional growth.
- 4- Provide graduates with leadership qualities and commitment to contribute actively to achieving the Abu Dhabi Vision 2030.

Program Student Outcomes

Upon graduation, a HCT graduate in Bachelor of Electrical Engineering Technology should demonstrate:

- a. An ability to select and apply the knowledge, techniques, skills, and modern tools of electrical engineering to broadly-defined engineering technology activities.
- b. An ability to select and apply a knowledge of mathematics, science, engineering, and technology to electrical engineering technology problems that require the application of principles and applied procedures or methodologies.
- c. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
- d. An ability to design systems, components, or processes for broadly-defined electrical engineering technology problems appropriate to program educational objectives.
- e. An ability to function effectively as a member or leader on a technical team.
- f. An ability to identify, analyze, and solve broadly-defined electrical engineering technology problems.
- g. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- h. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- i. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
- j. A knowledge of the impact of engineering technology solutions in a societal and global context.
- k. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Bachelor of Electrical Engineering Technology degree must successfully complete the following requirements:

1. Minimum of 146 credits which are divided as follows:
 - a. Minimum of 77 credits of program core requirements including 16 weeks work placement.
 - b. Minimum of 15 credits of major Elective
 - c. Minimum of 21 credits of Math and Science course.
 - d. General Studies requirements of 33 credits according to the General Studies breakdown.
2. Minimum CGPA of 2.00.

Core Courses		
Required Credits: 77		
EGN 1133	Design Thinking in Technology	3
EGN 2712	Applied Programming for Engineers	2
EGN 2806	Work Placement I	6
EGN 3012	Project Management	2
EGN 3212	Economics for Engineering	2
EGN 3806	Work Placement II	6
ELE 2114	Electrical Circuits	4
ELE 2181	Circuit Lab	1
ELE 2213	Digital Circuits	3
ELE 2303	Power Generation and Transmission	3
ELE 2314	Principles of Machines and Power	4
ELE 2403	Electronics I	3
ELE 2573	Electric Circuit Design and PCB Manufacturing	3
ELE 2603	Instrumentation and Control	3
ELE 2613	Industrial Automation	3
ELE 2903	Sophomore Design Project	3
ELE 3203	Communication Systems	3
ELE 3323	Electrical Machines	3
ELE 3333	Electrical Power Distribution	3
ELE 3413	Electronics II	3
ELE 3613	Signals and Systems	3
ELE 3614	Microcontroller Systems	4
ELE 4623	Control Systems	3
ELE 4902	Capstone Design Project I	2
ELE 4912	Capstone Design Project II	2

Course Credits

Elective Courses		
Required Credits: 15		
Power (PWR)		
ELE 4343	Power System Analysis (Core concentration)	3
ELE 4353	System Protection and Coordination (Core Concentration)	3
ELE 4363	Power Electronics (Core Concentration)	3
EGN 4333	Renewable Energy Systems (Elective)	3
ELE 4373	Electric Drives (Elective)	3
ELE 4383	Electrical Maintenance Operation (Elective)	3
ELE 4633	Digital Control Systems (Elective)	3
ELE 4643	Intelligent Systems (Elective)	3
ELE 4863	Special Topics in Electrical Engineering (Elective)	3
ELE 4893	Directed Study (Elective)	3
Electronics (ELS)		
ELE 4423	Embedded System Design (Core concentration)	3
ELE 4433	VLSI Design (Core concentration)	3
ELE 4653	Digital Signal Processing (Core concentration)	3
EGN 4333	Renewable Energy Systems (Elective)	3
ELE 4213	Digital Communication (Elective)	3
ELE 4363	Power Electronics (Elective)	3
ELE 4613	Programmable Devices (Elective)	3
ELE 4663	Robotics Technology (Elective)	3
ELE 4863	Special Topics in Electrical Engineering (Elective)	3
ELE 4893	Directed Study (Elective)	3
Communications (COM)		
ELE 4213	Digital Communication (Core concentration)	3
ELE 4223	Data Communication and Network (Core concentration)	3
ELE 4653	Digital Signal Processing (Core)	3
ELE 4233	Mobile Communications (Elective)	3
ELE 4243	Satellite Communications (Elective)	3
ELE 4253	Tetra Communications (Elective)	3
ELE 4613	Programmable Devices (Elective)	3
ELE 4863	Special Topics in Electrical Engineering (Elective)	3
ELE 4893	Directed Study (Elective)	3
Control and Instrumentation (ICS)		
ELE 4423	Embedded System Design (Core concentration)	3
ELE 4633	Digital Control (Core concentration)	3
ELE 4643	Intelligent System (Core concentration)	3
ELE 4393	Machine Control and Drives (Elective)	3
ELE 4443	Advanced Microprocessors (Elective)	3
ELE 4613	Programmable Devices (Elective)	3
ELE 4663	Robotic Technology (Elective)	3
ELE 4673	Advanced Control Systems (Elective)	3
ELE 4863	Special Topics in Electrical Engineering (Elective)	3
ELE 4893	Directed Study (Elective)	3

Course Credits

Mathematics and Science Courses**Required Credits: 21**

CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra and Differential Equations	3
MTH 3013	Calculus III	3
PHY 1203	Physics II	3

General Studies Courses**Required Credits: 33**

English, Arabic or other Languages	15
Humanities or Arts: AES 1003 Emirati Studies	3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering	3
Natural Sciences: PHY 1103 Physics	3
Social or Behavioral Sciences	9

<i>Total Required Credits</i>	<i>146</i>
<i>Maximum Duration of Study</i>	<i>6 years</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4 years</i>
<i>Program Code</i>	<i>BELET</i>
<i>Major Code</i>	<i>ELE</i>

Diploma in Electrical Engineering Technology (DELET) Exit Option

Program Educational Objectives

The Program Educational Objectives of the Diploma in Electrical Engineering Technology program are to:

- 1- Provide electrical engineering professionals with the technical knowledge and skills required by the industry to develop, design, and maintain electrical systems to highest level of industry standards.
- 2- Prepare graduates for a successful career as effective decision makers with strong communication and teamwork skills and an understanding of the global, ethical and social implications of the industry and Electrical Engineering profession.
- 3- Provide graduates with strong commitment to lifelong learning, continuing education, and professional growth.
- 4- Provide graduates with leadership qualities and commitment to contribute actively to achieving the Abu Dhabi Vision 2030.

Program Student Outcomes

Upon graduation, a HCT graduate in Diploma in Electrical Engineering Technology should demonstrate:

- a. An ability to apply the knowledge, techniques, skills, and modern tools of electrical engineering to narrowly defined engineering technology activities.
- b. An ability to apply a knowledge of mathematics, science, engineering, and technology to electrical engineering technology problems that require limited application of principles but extensive practical knowledge.
- c. An ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments.
- d. An ability to function effectively as a member of a technical team.
- e. An ability to identify, analyze, and solve narrowly defined engineering technology problems.
- f. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- g. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- h. An understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity.
- i. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Diploma in Electrical Engineering Technology must successfully complete the following minimum requirements:

1. A minimum of 80 credits, as follows:
 - 41 credits of major requirements, including work placement for 8 weeks

- Minimum of 15 credits of Math and science requirements
 - Minimum of 24 credits of General Studies requirements according to the General Studies breakdown
2. A minimum CGPA of 2.00.

Course Credits

Core Courses		
Required Credits: 41		
EGN 1133	Design Thinking in Technology	3
EGN 2712	Applied Programming for Engineers	2
EGN 2806	Work Placement I	6
ELE 2114	Electrical Circuits	4
ELE 2181	Circuit Lab	1
ELE 2213	Digital Circuits	3
ELE 2303	Power Generation and Transmission	3
ELE 2314	Principles of Machines and Power	4
ELE 2403	Electronics I	3
ELE 2573	Electric Circuit Design and PCB Manufacturing	3
ELE 2603	Instrumentation and Control	3
ELE 2613	Industrial Automation	3
ELE 2903	Sophomore Design Project	3

Mathematics and Science Courses		
Required Credits: 15		
CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
PHY 1203	Physics II	3

General Studies Courses		
Required Credits: 24		
English, Arabic or other Languages		9
Humanities or Arts		3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering		3
Natural Sciences: PHY 1103 Physics I		3
Social or Behavioral Sciences		6

Total Required Credits	80
Maximum Duration of Study	3 years
Cost Recovery Program	No
Minimum Duration of Study	2 years
Program Code	DELET
Major Code	ELE

Recommended Sequence of Study

Bachelor of Electrical Engineering Technology

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
LSC 1103	Academic Reading and Writing I	3	LSC 2103	Academic Reading and Writing II	3
LSS 1003	Life and Study Skills	3	MTH 1113	Statistics for Engineering	3
PHY 1103	Physics I	3	MTH 1203	Calculus I	3
EGN 1133	Design Thinking in Technology	3	PHY 1203	Physics II	3
MTH 1103	Pre Calculus	3	LSS 1123	Basic Methods of Scientific Research and Development	3
Year 1 Summer Semester			Year 2 Semester 4		
Required Credits: 6			Required Credits: 16		
AES 1013	Arabic Communications I	3	ELE 2303	Power Generation and Transmission	3
CHM 1103	Engineering Chemistry	3	ELE 2403	Electronics I	3
Year 2 Semester 3			Year 2 Summer Semester (Diploma)		
Required Credits: 16			Required Credits: 6		
AES 1003	Emirati Studies	3	ELE 2613	Industrial Automation	3
ELE 2114	Electrical Circuits	4	ELE 2573	Electric Circuit Design and PCB Manufacturing	3
MTH 2103	Calculus II	3	Year 2 Summer Semester (Bachelor)		
ELE 2213	Digital Circuits	3	Required Credits: 6		
ELE 2181	Circuit Lab	1	MTH 2503	Linear Algebra and Differential Equations	3
EGN 2712	Applied Programing for Engineers	2	ELE 2613	Industrial Automation	3
Year 2 Summer Semester (Diploma)			Year 3 Semester 5		
Required Credits: 6			Required Credits: 16		
ELE 2613	Industrial Automation	3	MTH 3013	Calculus III	3
ELE 2573	Electric Circuit Design and PCB Manufacturing	3	ELE 3614	Microcontroller Systems	4
Year 2 Summer Semester (Bachelor)			Year 3 Summer Semester		
Required Credits: 6			Required Credits: 6		
ELE 2613	Industrial Automation	3	EGN 3806	Work Placement II	6
ELE 2613	Industrial Automation	3	Year 4 Semester 7		
Year 3 Semester 6			Required Credits: 16		
Required Credits: 14			Required Credits: 14		
EGN 3012	Project Management	2	ELE 4902	Capstone Design Project I	2
ELE 3323	Electrical Machines	3	EGN 3212	Economics for Engineering	2
ELE 3203	Communication Systems	3	ELE 4623	Control Systems	3
LSS 2403	Innovation and Entrepreneurship	3	ELE 4XX3	Major Elective	3
ELE 2573	Electric Circuit Design and PCB Manufacturing	3	ELE 4XX3	Major Elective	3
Year 4 Semester 8			Year 4 Semester 8		
Required Credits: 14			Required Credits: 14		
ELE 4912	Capstone Design Project II	2	ELE 4912	Capstone Design Project II	2
ELE 3333	Electrical Power Distribution	3	ELE 3333	Electrical Power Distribution	3
ELE 4XX3	Major Elective	3	ELE 4XX3	Major Elective	3
ELE 4XX3	Major Elective	3	ELE 4XX3	Major Elective	3
ELE 4XX3	Major Elective	3	ELE 4XX3	Major Elective	3
AES 3003	Professional Arabic	3	AES 3003	Professional Arabic	3

Faculty

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Syed Saddique, PhD Elec. and Computer Eng., University of Newcastle upon Tyne

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Maad Shatnawi, PhD Intelligent Systems, UAE University
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Zine-Eddine Abid, PhD Electrical Engineering, University of Minnesota

DUBAI MEN'S COLLEGE

Basim Al Lami, PhD Microprocessor Technology, University of Liverpool
Farid Flitti, PhD Computer Vision and Image Processing, Strasbourg 1 University
Geeta Abraham, Masters Electronic Engineering, Indian Institute of Technology, Madras
Jamil Altit, Masters Electrical Engineering, Kansas State University
Khaldoon Mhaidat, PhD Electrical Engineering, Oregon Health and Science University
Sameh Ghwanmeh, PhD Electrical and Computer Engineering, Liverpool John Moores
Scott Ritchie, Post Graduate Diploma Building Services Engineering, Brunel University

DUBAI WOMEN'S COLLEGE

Ammar Nimer Asad Natsheh, PhD Electrical and Electronic Engineering, Loughborough University
Asif Nawaz, PhD Engineering, Electromagnetic field and Microwave technology, Beijing University of Posts and Telecommunications
Mohammed Aloqlah, PhD Electrical Engineering, Case Western Reserve University
Qasem Bashayreh, Masters Communication Engineering, Yarmouk University
Walid Zgallai, PhD Electrical Engineering, City University

FUJAIRAH MEN'S COLLEGE

Antonio Abrahams, Masters Elec. and Computer Eng., University of California

Juan Johnson, Master of Science Electrical Engineering, University of Virginia

Mohammed Shah, PhD Electrical and Electronic Engineering, Cranfield University

Suresh Mathew, M.Tech Industrial Electronics, Mysore University

FUJAIRAH WOMEN'S COLLEGE

Imad Abdel-Hafez, Masters Electrical and Electronic Engineering, Bilkent University

RAS AL KHAIMAH MEN'S COLLEGE

Arif Al-Judi, PhD Elec. and Computer Eng., University of Calgary

Asad Hindash, Masters Electrical Engineering, New Mexico State University

Nicolae Galupa, PhD Comp. Science and Auto. Control, G. Asachi Technical University of Iasi

Simon Hissem, Masters Electronic Engineering, University of Québec, Trois, Rivières

Zaid Sami Abd-Alghany, PhD Electrical and Electronic Engineering, Monash University

RAS AL KHAIMAH WOMEN'S COLLEGE

Jawdat Asous, Masters Electrical and Electronic Engineering, National University of Malaysia

Kapila Chandika Wavegedara, PhD Wireless Communications, University of British Columbia

Munther Gdeisat, PhD Communication Engineering, Liverpool John Moores University

Yacouba Moumouni, PhD Electrical Engineering, University of Nevada

Yasser Mahgoub, PhD Electrical and Computer, Carleton University

SHARJAH MEN'S COLLEGE

Abdulrohman Qatawneh, PhD Electrical Engineering, Technical University of Madrid

Arif Karrani, Bachelor Electrical Engineering, University of Arizona

Aziz El Idrisi, Masters Electrical Engineering, Oklahoma State University

Gabriel Gannat, PhD Numer'l Modelling Optical Dev, University of Glamorgan

Haitham Tayyar, PhD Electrical Engineering, University of British Columbia

Ishaq Al Ahmad, PhD Electrical Engineering, University of Windsor

Mohammed Alqedra, PhD Electrical Engineering, The University of Manitoba

Nabil Afifi, Master Telecommunication, Curtin University of Technology

Naim Mohamed Rahmani, PhD Electrical Engineering, Nancy I University

Thomas Mc Neill, PhD Engineering, University of South Australia

Zimran Rafique, PhD Electrical and Electronic Engineering, Auckland University of Technology

SHARJAH WOMEN'S COLLEGE

Azzedine Ferrah, PhD Electrical and Electronic Engineering, University of Nottingham

Ehsan Jarrar, Masters Information Technology, Heriot Watt University

Haris M. Khalid, PhD Control Systems Engineering, King Fahd University of Petroleum and Minerals (KFUPM)

Kamal Abuqaoud, Masters Electrical Engineering, American University of Sharjah

Mahmoud Qasaymeh, PhD Electrical Engineering, Wichita State University

WESTERN REGION COLLEGES

Andreas Tsigopoulos, PhD Communication Engineering, N and K University of Athens

Georgios (George) Tompras, PhD Physics, Aristotle University of Thessaloniki

Muhammad Khalil Shahid, PhD Mgt Science and Engineering, Beijing University of Posts and Telecommunications

Shanubhog Raghu, PhD Applied Electronics, Gulbarga University

Tarig Faisal, PhD Engineering, University of Malaya

Department of Industrial Engineering Technology (IET)

Bachelor of Industrial Engineering Technology (BINET)

Program Mission

The Industrial Engineering Technology program provides students with state of the art industrial engineering education and skills that qualifies them to serve their society effectively through the practice of Industrial Engineering profession.

Program Description

Bachelor of Industrial Engineering Technology provides an excellent broad education with multidisciplinary specializations to cater for the global UAE industry. The HCT Industrial Engineering Technology program aims to produce high-quality engineers with qualities of productivity, timeliness, dedication, and competence in the workplace. Graduates are expected to have the ability to work logically, accurately and efficiently; to gather and use information effectively; and to continue enhancing their careers through lifelong learning. Moreover, the program is designed to prepare interested students for graduate studies in Industrial Engineering Technology and other areas of professional practice. To this end, Industrial Engineering Technology students are trained to support the analysis, design, development and improvement of manufacturing and service systems from quality, productivity, financial and safety perspectives.

The Bachelor of Industrial Engineering Technology curriculum stresses the effective use of technology, information resources and engineering tools; students are trained to use state of the art software packages necessary to facilitate their efforts to optimize, statistically analyze and simulate existing systems, and to test and validate potential gains attainable from improving the system. In addition, the program instills leadership qualities based on moral and ethical principles coupled with sound and rational judgment.

This program offers elective concentrations in:

- **Manufacturing and Supply Chain**
- **Logistics and Transportation**

Students will have the option to graduate with a Diploma in Industrial Engineering Technology upon the successful completion of 78 credits inclusive of the 8 week Work Placement.

Program Educational Objectives

The Program Educational Objectives of the Bachelor of Industrial Engineering Technology program at HCT is to produce graduates who will:

1. Integrate their attained knowledge and skills with their job

expertise to identify and solve problems, and to optimize the interactions among elements of the systems within their area of practice to enhance safety, quality and productivity.

2. Practice their roles in serving their organizations and community with firm commitment to social values and professional ethics.
3. Continue to improve their personal and professional abilities through self and administrated learning and training related to their job functions for continual professional growth.
4. Serve as future team leaders with effective professional communication and technical skills and contribute actively to achieving Abu Dhabi Vision 2030.

Program Student Outcomes

Upon graduation, a HCT graduate in Bachelor of Industrial Engineering Technology should demonstrate:

- a. An ability to select and apply the knowledge, techniques, skills, and modern tools of industrial engineering to broadly-defined engineering technology activities.
- b. An ability to select and apply a knowledge of mathematics, science, engineering, and technology to industrial engineering technology problems that require the application of principles and applied procedures or methodologies.
- c. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
- d. An ability to design systems, components, or processes for broadly-defined industrial engineering technology problems appropriate to program educational objectives.
- e. An ability to function effectively as a member or leader on a technical team.
- f. An ability to identify, analyze, and solve broadly-defined industrial engineering technology problems.
- g. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- h. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- i. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
- j. A knowledge of the impact of engineering technology solutions in a societal and global context.
- k. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Bachelor of Industrial Engineering Technology degree must successfully complete the following minimum requirements:

1. A minimum of 146 credits, as follows:
 - a. Minimum 95 credits of major requirements as follows:
 - Minimum of 80 credits of major requirements including Work Placement for 16 weeks.
 - Minimum of 15 credits of major electives.
 - b. Minimum of 18 credits of Math and science requirements.
 - c. Minimum of 33 credits of General Studies requirements according to the General Studies breakdown.
2. A minimum CGPA of 2.00.

Course Credits

Core Courses

Required Credits: 80

EGN 1133	Design Thinking in Technology	3
EGN 2101	Computer Aided Drafting	1
EGN 2233	Engineering Mechanic Fundamentals	3
EGN 2712	Applied Programing for Engineers	2
EGN 2806	Work Placement I	6
EGN 3012	Project Management	2
EGN 3212	Economics for Engineering	2
EGN 3333	Health, Safety & Environment	3
EGN 3806	Work Placement II	6
IET 2003	Introduction to Industrial Engineering	3
IET 2103	Technology Innovation and Integration	3
IET 2213	Work Measurement and Ergonomics	3
IET 2223	Quality Control	3
IET 2233	Introduction to Maintenance Management	3
IET 2413	Manufacturing Technologies and Materials	3
IET 2421	Engineering Measurements Lab	1
IET 2902	Sophomore Design Project	2
IET 3203	Operations Management	3
IET 3213	Lean Thinking and Six Sigma	3
IET 3233	Facilities Planning and Material Handling	3
IET 3303	Operations Research	3
IET 3313	Applied Engineering Statistics	3
IET 3613	Financial Analysis and Cost Accounting	3
IET 4103	Enterprise Information Management	3
IET 4303	Queuing Theory and Process Simulation	3
IET 4902	Capstone Design Project I	2
IET 4912	Capstone Design Project II	2
LGE 2003	Logistics Principles and Supply Chain Management	3

Mathematics and Science Courses

Required Credits: 18

CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra and Differential Equations	3
PHY 1203	Physics II	3

Major Electives

Required Credits: 15

General Electives

IET 4113	Energy Science and Technology	3
IET 4203	Decision and Risk Analysis	3
IET 4223	Human Resource Management	3
IET 4233	Service Systems Engineering	3
IET 4243	Total Quality Management	3
IET 4383	Performance Management	3
IET 4403	Industrial Robotics	3
IET 4413	Computer Integrated Manufacturing	3
IET 4603	Enterprise Resource Planning	3
IET 4783	ISO Standards and Excellence	3
IET 4803	Special Topics in Industrial Engineering	3
IET 4893	Directed Study	3

Manufacturing and Supply Chain (MSC)

IET 4133	Managerial Accounting	3
IET 4203	Decision and Risk Analysis	3
IET 4503	Introduction to Marketing	3
IET 4513	Purchasing and Contract Management	3
IET 4523	Warehouse and Inventory Management	3
IET 4553	Manufacturing in Supply Chain	3
IET 4563	Supply Chain Strategy and Management	3
IET 4573	Supply Chain Risk Management	3
IET 4623	Logistics and Transportation I	3
IET 4803	Special Topics in Industrial Engineering	3
IET 4893	Directed Study	3
LGE 3413	Sales and Distribution in Logistics	3

Logistics and Transportation (LGT)

IET 4203	Decision and Risk Analysis	3
IET 4583	Procurement and Inventory Management	3
IET 4593	Customer Relationship Management Systems	3
IET 4623	Logistics and Transportation I	3
IET 4653	Logistics and Transportation II	3
IET 4803	Special Topics in Industrial Engineering	3
IET 4893	Directed Study	3
LGE 4453	Management of Distribution Networks	3
MAR 4703	Shipping Management	3

General Studies

Required Credits: 33

English, Arabic or other Languages	15
Humanities or Arts : AES 1003 Emirati Studies	3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering	3
Natural Sciences: PHY 1103 Physics I	3
Social or Behavioral Sciences	9

Total Required Credits	146
Maximum Duration of Study	6 years
Cost Recovery Program	No
Minimum Duration of Study	4 years
Program Code	BINET
Major Code	IET

Diploma in Industrial Engineering Technology (DINET) Exit Option

Program Educational Objectives

The Program Educational Objectives of the Diploma in Industrial Engineering program at HCT is to produce graduates who will:

1. Integrate their attained knowledge and skills with their job expertise to identify and solve problems, and to optimize the interactions among elements of the systems within their area of practice to enhance safety, quality and productivity.
2. Practice their roles in serving their organizations and community with firm commitment to social values and professional ethics.
3. Continue improve their personal and professional abilities through self and administrated learning and training related to their job functions for continual professional growth.
4. Serve as future team leaders with effective professional communication and technical skills and contribute actively to achieving Abu Dhabi Vision 2030.

Program Student Outcomes

Upon graduation, a HCT graduate in Diploma in Industrial Engineering Technology should demonstrate:

- a. An ability to apply the knowledge, techniques, skills, and modern tools of industrial engineering to narrowly defined engineering technology activities.
- b. An ability to apply a knowledge of mathematics, science, engineering, and technology to industrial engineering technology problems that require limited application of principles but extensive practical knowledge.
- c. An ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments.
- d. An ability to function effectively as a member of a technical team.
- e. An ability to identify, analyze, and solve narrowly defined industrial engineering technology problems.
- f. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- g. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- h. An understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity.
- i. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Diploma in Industrial Engineering Technology must successfully complete the following minimum requirements:

1. A minimum of 78 credits, as follows:
 - a. 39 credits of major requirements, including Work

Placement for 8 weeks.

- b. A minimum of 15 credits of Math and Science requirements.
 - c. Minimum of 24 credits of General Studies requirements according to the General Studies breakdown.
2. A minimum CGPA of 2.00.

Course Credits

Core Courses

Required Credits: 39

EGN 1133	Design Thinking in Technology	3
EGN 2101	Computer Aided Drafting	1
EGN 2233	Engineering Mechanic Fundamentals	3
EGN 2806	Work Placement I	6
EGN 3012	Project Management	2
IET 2003	Introduction to Industrial Engineering	3
IET 2103	Technology Innovation and Integration	3
IET 2213	Work Measurement and Ergonomics	3
IET 2223	Quality Control	3
IET 2233	Introduction to Maintenance Management	3
IET 2413	Manufacturing Technologies and Materials	3
IET 2421	Engineering Measurements Lab	1
IET 2902	Sophomore Design Project	2
LGE 2003	Logistics Principles and Supply Chain Management	3

Mathematics and Science Courses

Required Credits: 15

CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
PHY 1203	Physics II	3

General Studies Courses

Required Credits: 24

English, Arabic or other Languages	9
Humanities or Arts : AES 1003 Emirati Studies	3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering	3
Natural Sciences: PHY 1103 Physics I	3
Social or Behavioral Sciences	6

Total Required Credits	78
Maximum Duration of Study	3 years
Cost Recovery Program	No
Minimum Duration of Study	2 years
Program Code	DINET
Major Code	IET

Recommended Sequence of Study

Bachelor of Industrial Engineering Technology (BINET)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
LSC 1103	Academic Reading and Writing I	3	LSC 2103	Academic Reading and Writing II	3
LSS 1003	Life and Study Skills	3	MTH 1113	Statistics for Engineering	3
PHY 1103	Physics I	3	MTH 1203	Calculus I	3
EGN 1133	Design Thinking in Technology	3	PHY 1203	Physics II	3
MTH 1103	Pre Calculus	3	LSS 1123	Basic Methods of Scientific Research and Development	3
Year 1 Summer Semester			Year 2 Semester 4		
Required Credits: 6			Required Credits: 14		
AES 1013	Arabic Communications I	3	LGE 2003	Logistics Principles and Supply Chain Management	3
CHM 1103	Engineering Chemistry	3	IET 2103	Technology Innovation and Integration	3
Year 2 Semester 3			Year 2 Summer Semester		
Required Credits: 16			Required Credits: 6		
AES 1003	Emirati Studies	3	EGN 2806	Work Placement I	6
EGN 2101	Computer Aided Drafting	1	Year 3 Semester 6		
IET 2003	Introduction to Industrial Engineering	3	Required Credits: 15		
EGN 2233	Engineering Mechanic Fundamentals	3	IET 3303	Operations Research	3
IET 2413	Manufacturing Technologies and Materials	3	IET 3313	Applied Engineering Statistics	3
MTH 2103	Calculus II	3	IET 3613	Financial Analysis and Cost Accounting	3
Year 2 Summer Semester			Year 3 Semester 6		
Required Credits: 6			Required Credits: 15		
IET 2213	Work Measurement and Ergonomics	3	IET 3213	Lean Thinking and Six Sigma	3
IET 2223	Quality Control	3	LSS 2403	Innovation and Entrepreneurship	3
Year 3 Semester 5			Year 4 Semester 7		
Required Credits: 16			Required Credits: 17		
LSC 2183	English for Specific Purposes	3	IET 4XX3	Major Elective	3
MTH 2503	Linear Algebra and Differential Equations	3	IET 4902	Capstone Design Project I	2
IET 3203	Operations Management	3	IET 4303	Queuing Theory and Process Simulation	3
EGN 3212	Economics for Engineering	2	IET 4XX3	Major Elective	3
IET 3233	Facilities Planning and Material Handling	3	IET 4XX3	Major Elective	3
EGN 2712	Applied Programing for Engineers	2	AES 3003	Professional Arabic	3
Year 3 Summer Semester			Year 4 Semester 8		
Required Credits: 6			Required Credits: 14		
EGN 3806	Work Placement II	6	IET 4912	Capstone Design Project II	2
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 17			Required Credits: 14		
IET 4XX3	Major Elective	3	IET 4103	Enterprise Information Management	3
IET 4902	Capstone Design Project I	2	EGN 3333	Health, Safety & Environment	3
IET 4303	Queuing Theory and Process Simulation	3	IET 4XX3	Major Elective	3
IET 4XX3	Major Elective	3	IET 4XX3	Major Elective	3
IET 4XX3	Major Elective	3			
AES 3003	Professional Arabic	3			

Department of Logistics Engineering Technology (LGET)

Bachelor of Logistics Engineering Technology (BLGET)

Program Mission

The Bachelor of Logistics Engineering Technology program prepares graduates to be regional leaders and aspire them to be a global leader in creating and disseminating integrative knowledge in Logistics Engineering Technology.

Program Description

Bachelor of Logistics Engineering Technology provides an excellent broad education with specializations to cater to the global UAE logistics industry. The HCT Logistics Engineering Technology program aims to produce high-quality engineers with qualities of productivity, timeliness, dedication, and competence in the workplace. Graduates are expected to have the ability to work logically, accurately and efficiently; to gather and use information effectively; and to continue enhancing their careers through lifelong learning. Moreover, the program is designed to prepare interested students for graduate studies in logistics engineering technology and other areas of professional practice. To this end, Logistics Engineering Technology students are trained to support the analysis, design, development and improvement of logistics systems in the manufacturing and service arenas.

The Bachelor of Logistics Engineering Technology curriculum stresses the effective use of technology, information resources and engineering tools; students are trained to use state of the art software packages necessary to facilitate their efforts to analyze and optimize existing systems, and to test and validate potential gains attainable from improving the system. In addition, the program instills leadership qualities based on moral and ethical principles coupled with sound and rational judgment.

Students will have the option to graduate with a Diploma in Logistics Engineering Technology upon the successful completion of 81 credits inclusive of the 8 week Work Placement.

Program Educational Objectives

The Program Educational Objectives of the Bachelor of Logistics Engineering Technology program are to:

1. Provide logistics professionals with the technical knowledge and skills required by the industry to highest level of standards.
2. Prepare graduates for a successful career as effective decision makers with strong communication and teamwork skills and an understanding of the global, ethical and social implications of engineering profession.
3. Teach graduates strong commitment to lifelong learning, continuing education, and professional growth.
4. Instill graduates with leadership qualities and commitment to contribute actively to their profession.

Program Student Outcomes

Upon graduation, a HCT graduate in Bachelor of Logistics Engineering Technology should demonstrate:

- a. An ability to select and apply the knowledge, techniques, skills, and modern tools of logistics engineering to broadly-defined engineering technology activities.
- b. An ability to select and apply a knowledge of mathematics, science, engineering, and technology to logistics engineering technology problems that require the application of principles and applied procedures or methodologies.
- c. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
- d. An ability to design systems, components, or processes for broadly-defined logistics engineering technology problems appropriate to program educational objectives.
- e. An ability to function effectively as a member or leader on a technical team.
- f. An ability to identify, analyze, and solve broadly-defined logistics engineering technology problems.
- g. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- h. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- i. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
- j. A knowledge of the impact of engineering technology solutions in a societal and global context.
- k. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Bachelor of Logistics Engineering Technology degree must successfully complete the following minimum requirements:

1. A minimum of 146 credits, as follows:
 - a. A minimum 95 credits of major requirements as follows:
 - Minimum of 83 core courses including Work Placement for 16 weeks
 - Minimum of 12 credits of major electives
 - b. A minimum of 18 credits of Math and science requirements
 - c. A minimum of 33 credits of General Studies requirements according to the General Studies breakdown and as advised in the study plan of the program.
2. A minimum CGPA of 2.00.

Course Credits

Course Credits

Core Courses

Required Credits: 83

EGN 1133	Design Thinking in Technology	3
EGN 2101	Computer Aided Drafting	1
EGN 2233	Engineering Mechanic Fundamentals	3
EGN 2712	Applied Programing for Engineers	2
EGN 2806	Work Placement I	6
EGN 3012	Project Management	2
EGN 3212	Economics for Engineering	2
EGN 3333	Health, Safety and Environment	3
EGN 3806	Work Placement II	6
IET 2103	Technology Innovation and Integration	3
IET 3203	Operations Management	3
IET 3233	Facilities Planning and Material Handling	3
IET 3303	Operations Research	3
IET 4513	Purchasing and Contract Management	3
IET 4523	Warehouse and Inventory Management	3
LGE 2003	Logistics Principles and Supply Chain Management	3
LGE 2013	Transportation Modes	3
LGE 2203	Introduction to Enterprise Information Management	3
LGE 2313	Managing People and Organizations	3
LGE 2902	Sophomore Design Project	2
LGE 3203	ERP I Principles	3
LGE 3212	ERP II Applications	2
LGE 3413	Sales and Distribution in Logistics	3
LGE 3503	Accounting for Managers	3
LGE 4303	Quality Control and Management	3
LGE 4423	Intermodal Freight Transport	3
LGE 4453	Management of Distribution Networks	3
LGE 4902	Capstone Design Project I	2
LGE 4911	Capstone Design Project II	1

Major Elective Courses

Required Credits: 12

LGE 4003	National Transport and Planning Law	3
LGE 4013	Hazardous Goods Management	3
LGE 4203	GIS in Logistics	3
LGE 4313	International Human Resource Management	3
LGE 4403	Port Management	3
LGE 4413	Airport Management	3
LGE 4433	Public Transport	3
LGE 4443	Airline Management	3
LGE 4463	Maritime Transport	3
LGE 4603	Transport and Economic Geography	3
LGE 4803	Special Topics in Logistics Engineering	3
LGE 4893	Directed Study	3
MAR 4703	Shipping Management	3

Mathematics and Science Courses

Required Credits: 18

CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra and Differential Equations	3
PHY 1203	Physics II	3

General Studies Courses

Required Credits: 33

English, Arabic or other Languages	15
Humanities or Arts : AES 1003 Emirati Studies	3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering	3
Natural Sciences: PHY 1103 Physics I	3
Social or Behavioral Sciences	9

<i>Total Required Credits</i>	<i>146</i>
<i>Maximum Duration of Study</i>	<i>6 years</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4 years</i>
<i>Program Code</i>	<i>BLGET</i>
<i>Major Code</i>	<i>LGE</i>

Diploma in Logistics Engineering Technology (DLGET) Exit Option

Program Educational Objectives

The Program Educational Objectives of the Diploma in Logistics Engineering Technology program are to:

1. Provide logistics professionals with the technical knowledge and skills required by the industry to highest level of standards.
2. Prepare graduates for a successful career as effective decision makers with strong communication and teamwork skills and an understanding of the global, ethical and social implications of engineering profession.
3. Teach graduates strong commitment to lifelong learning, continuing education, and professional growth.
4. Instill graduates with leadership qualities and commitment to contribute actively to their profession.

Program Student Outcomes

Upon graduation, a HCT graduate in Diploma in Logistics Engineering Technology should demonstrate:

- a. An ability to apply the knowledge, techniques, skills, and modern tools of logistics engineering to narrowly defined engineering technology activities.
- b. An ability to apply a knowledge of mathematics, science, engineering, and technology to logistics engineering technology problems that require limited application of principles but extensive practical knowledge.
- c. An ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments.
- d. An ability to function effectively as a member of a technical team.
- e. An ability to identify, analyze, and solve narrowly defined logistics engineering technology problems.
- f. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- g. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- h. An understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity.
- i. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Diploma in Logistics Engineering Technology degree must successfully complete the following minimum requirements:

1. A minimum of 81 credits, as follows:
 - 42 credits of major requirements, including Work Placement for 8 weeks
 - A minimum of 15 credits of Math and science requirements
 - Minimum of 24 credits of General Studies requirements

according to the General Studies breakdown and as advised in the study plan of the program.

2. A minimum CGPA of 2.00.

Diploma in Logistics Engineering Technology Curriculum

		Course Credits
Core Courses		
Required Credits: 42		
EGN 1133	Design Thinking in Technology	3
EGN 2101	Computer Aided Drafting	1
EGN 2233	Engineering Mechanic Fundamentals	3
EGN 2806	Work Placement I	6
EGN 3333	Health, Safety and Environment	3
IET 2103	Technology Innovation and Integration	3
IET 3203	Operations Management	3
IET 3233	Facilities Planning and Material Handling	3
IET 4523	Warehouse and Inventory Management	3
LGE 2003	Logistics Principles and Supply Chain Management	3
LGE 2013	Transportation Modes	3
LGE 2203	Introduction to Enterprise Information Management	3
LGE 2313	Managing People and Organizations	3
LGE 2902	Sophomore Design Project	2
Mathematics and Science Courses		
Required Credits: 15		
CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
PHY 1203	Physics II	3
General Studies Courses		
Required Credits: 24		
English, Arabic or other Languages		9
Humanities or Arts: AES 1003 Emirati Studies		3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering		3
Natural Sciences: PHY 1103 Physics I		3
Social or Behavioral Sciences		6
Total Required Credits		81
Maximum Duration of Study		3 years
Cost Recovery Program		No
Minimum Duration of Study		2 years
Program Code		DLGET
Major Code		LGE

Recommended Sequence of Study

Bachelor of Logistics Engineering Technology

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
LSC 1103	Academic Reading and Writing I	3	LSC 2103	Academic Reading and Writing II	3
LSS 1003	Life and Study Skills	3	MTH 1113	Statistics for Engineering	3
PHY 1103	Physics I	3	MTH 1203	Calculus I	3
EGN 1133	Design Thinking in Technology	3	PHY 1203	Physics II	3
MTH 1103	Pre Calculus	3	LSS 1123	Basic Methods of Scientific Research and Development	3
Year 1 Summer Semester					
Required Credits: 6					
AES 1013	Arabic Communications I	3			
CHM 1103	Engineering Chemistry	3			
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 16			Required Credits: 17		
AES 1003	Emirati Studies	3	IET 3203	Operations Management	3
LGE 2003	Logistics Principles and Supply Chain Management	3	LGE 2313	Managing People and Organizations	3
MTH 2103	Calculus II	3	LGE 2013	Transportation Modes	3
EGN 2233	Engineering Mechanic Fundamentals	3	IET 2103	Technology Innovation and Integration	3
LGE 2203	Introduction to Enterprise Information Management	3	EGN 3333	Health, Safety and Environment	3
EGN 2101	Computer Aided Drafting	1	LGE 2902	Sophomore Design Project	2
Year 2 Summer Semester			Year 2 Summer Semester		
Required Credits: 6			Required Credits: 6		
IET 3233	Facilities Planning and Material Handling	3	EGN 2806	Work Placement I	6
IET 4523	Warehouse and Inventory Management	3			
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 15			Required Credits: 15		
LSC 2183	English for Specific Purposes	3	EGN 2712	Applied Programing for Engineers	2
MTH 2503	Linear Algebra and Differential Equations	3	LSS 2403	Innovation and Entrepreneurship	3
IET 3303	Operations Research	3	EGN 3012	Project Management	2
IET 4513	Purchasing and Contract Management	3	LGE 3413	Sales and Distribution in Logistics	3
LGE 3203	ERP I Principles	3	LGE 3503	Accounting for Managers	3
			LGE 3212	ERP II Applications	2
Year 3 Summer Semester					
Required Credits: 6					
EGN 3806	Work Placement II	6			
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 16			Required Credits: 13		
EGN 3212	Economics for Engineering	2	LGE 4XX3	Major Elective	3
LGE 4XX3	Major Elective	3	LGE 4XX3	Major Elective	3
LGE 4XX3	Major Elective	3	LGE 4911	Capstone Design Project II	1
LGE 4902	Capstone Design Project I	2	LGE 4303	Quality Control and Management	3
AES 3003	Professional Arabic	3	LGE 4453	Management of Distribution Networks	3
LGE 4423	Intermodal Freight Transport	3			

Faculty

ABU DHABI MEN'S COLLEGE

Akhtar Mian, Post Graduate Diploma Geographic Information Sciences, Nelson Mandela Metropolitan University

Anf Ziadat, PhD Civil Engineering, South Dakota School Mines and Technology

Badi Ali Ali, Masters Geodetic Science, The Ohio State University

Mamoon Hammad, PhD Civil Engineering, Concordia University

Milan Krasulja, PhD Civil Engineering, University of Belgrade

Nassir Eltinay, Masters Architectural Engineer, The University of Kansas

Sukina Alzyoud, PhD Civil Engineering, Imperial College London

Tarig Ahmed, PhD Civil Engineering, University of London

Vasko Alexandrov, PhD Civil Engineering, University of Architecture, Civil Engineering and Geodesy

Zafer Bukey, Masters Industrial Engineering, University of Toronto

Department of Maritime Studies (MAR)

Bachelor of Applied Science in Marine Engineering Technology

Program Mission

The mission of the degree program is to give education and training to cadets to enable them to pursue a career as a marine engineering officer at sea.

The degree program includes the required academic component for the certificates of competency up to Chief Engineer's level. These certificates will be issued by the Federal Transport Authority once the cadets have sufficient seagoing experience.

Program Description

This programme educates students in the field of Marine Engineering Technology, to prepare them to work in a wide range of maritime related industries in the UAE including: the offshore industry; shipyards; classifications societies; ship design consultancies; ship owners, and ports.

Program Student Outcomes

Upon graduation, a HCT graduate in Bachelor of Applied Science in Marine Engineering Technology should have the ability to:

- Demonstrate the competency to undertake the tasks, duties and responsibilities of a ship's chief engineer
- Demonstrate a knowledge base in relevant marine related topics suitable for a career as a marine professional
- Effectively lead, work and communicate in a team
- Expand knowledge and capabilities through continuing education or other lifelong learning experiences

Completion Requirements

Students seeking the Bachelor of Applied Science in Marine Engineering Technology must successfully complete the following requirements:

- Minimum of 166 credits which are divided as follows:
 - Major requirements of 97 credits as specified by program core requirements.
 - General Engineering Core Courses: 6 credits.
 - Sea Time Courses: 30 credits.
 - General Studies requirements of 33 credits according to the General Studies breakdown.
- Minimum CGPA of 2.00.

Course Credits

Core Courses		
Required Credits: 97		
MET 1113	Fabrication and Repair I	3
MET 1122	Introduction to Marine Engineering	2
MET 1132	Marine Chemistry	2
MET 2303	Mathematics for Marine Engineering	3
MET 2313	Marine Engineering Knowledge	3
MET 2403	Fluid Mechanics for Marine Engineering	3
MET 2413	Applied Marine Mechanics I	3
MET 2423	Ship Stability	3
MET 2433	Fabrication and Repair II	3
MET 2442	Marine Material Technology I	2
MET 3603	Applied Marine Mechanics II	3
MET 3613	Ship Construction	3
MET 3623	Marine Engineering Control I	3
MET 3633	Marine Electrical Systems I	3
MET 3643	Diesel Engine Maintenance	3
MET 4804	Engineering Knowledge - Diesel	4
MET 4814	Engineering Knowledge - Steam	4
MET 4823	Marine Air-conditioning and Refrigeration	3
MET 4833	Marine Engineering Control II	3
MET 4843	Marine Electrical Systems II	3
MET 5005	Leadership for Chief Engineers	5
MET 5014	Marine Machinery Operations	4
MET 5024	Advanced Ship Regulation and Survey	4
MET 5903	Marine Material Technology II	3
MET 5914	Ship Design and Technology	4
MET 5924	Advanced Marine Engineering Knowledge	4
MET 5934	Marine Engineering Project	4
MTR 2003	Marine Physical Science	3
MTR 2012	Shipboard Operational Leadership	2
MTR 2102	Ship Regulation and Survey	2
MTR 2103	Ship Operational Safety	3
General Engineering Core Courses		
Required Credits: 6		
EGN 1103	Engineering Measurements & CAD Intro	3
EMC 3023	Thermodynamics I	3
Sea Time Core Courses		
Required Credits: 30		
MET 1210	Marine Engineering Seatime I	10
MET 3510	Marine Engineering Seatime II	10
MET 4710	Marine Engineering Seatime III	10

Course Credits

General Studies Courses	
Required Credits: 33	
English, Arabic or other Languages-MTR 1003	15
Humanities or Arts	3
Information Technology or Mathematics-LSM 1103	3
Natural Sciences-PHY 1103	3
The Social or Behavioural Sciences	9

<i>Total Required Credits</i>	<i>166</i>
<i>Maximum Duration of Study</i>	<i>7 years</i>
<i>Cost Recovery Program</i>	<i>Yes</i>
<i>Minimum Duration of Study</i>	<i>5 years</i>
<i>Program Code</i>	<i>MAREG</i>
<i>Major Code</i>	<i>MET</i>

Recommended Sequence of Study

Bachelor of Applied Science in Marine Engineering Technology

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 22			Required Credits: 10		
EGN 1103	Engineering Measurements and CAD Introduction	3	MET 1210	Marine Engineering Seitime I	10
PHY 1103	Physics I	3			
LSM 1103	Technical Mathematics	3			
MET 1113	Fabrication and Repair I	3			
MET 1122	Introduction to Marine Engineering	2			
MET 1132	Marine Chemistry	2			
MTR 1003	Maritime English Communication	3			
LSS 1003	Life and Study Skills	3			
Year 1 Summer			Year 2 Semester 3		
Personal Survival Techniques			Required Credits: 19		
Fire Prevention and Fire Fighting			LSC 1503	Academic Spoken Communication	3
Elementary First Aid			MTR 2003	Marine Physical Science	3
Personal Safety & Social Responsibilities			MTR 2012	Shipboard Operational Leadership	2
Security Awareness Training			MTR 2102	Ship Regulation and Survey	2
			MTR 2103	Ship Operational Safety	3
			MET 2303	Mathematics for Marine Engineering	3
			MET 2313	Marine Engineering Knowledge	3
			Year 2 Semester 4		
			Required Credits: 20		
			EMC 3023	Thermodynamics I	3
			MET 2403	Fluid Mechanics for Marine Engineering	3
			MET 2413	Applied Marine Mechanics I	3
			MET 2423	Ship Stability	3
			MET 2433	Fabrication and Repair II	3
			MET 2442	Marine Material Technology I	2
			LSC 1103	Academic Reading and Writing I	3
			Year 2 Summer		
			Advanced Fire Fighting		
			Proficiency in Survival Craft & Rescue Boats		
			Medical First Aid		

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Recommended Sequence of Study Bachelor of Applied Science in Marine Engineering Technology Cont...

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 10			Required Credits: 21		
MET 3510	Marine Engineering Seatime II	10	MET 3603	Applied Marine Mechanics II	3
			MET 3613	Ship Construction	3
			MET 3623	Marine Engineering Control I	3
			MET 3633	Marine Electrical Systems I	3
			MET 3643	Diesel Engine Maintenance	3
			AES 1003	Emirati Studies	3
			LSC 2233	Intercultural Communications in English	3
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 10			Required Credits: 20		
MET 4710	Marine Engineering Seatime III	10	MET 4804	Engineering Knowledge - Diesel	4
			MET 4814	Engineering Knowledge - Steam	4
			MET 4823	Marine Air-conditioning and Refrigeration	3
			MET 4833	Marine Engineering Control II	3
			MET 4843	Marine Electrical Systems II	3
			LSS 1123	Basic Methods of Scientific Research and Development	3
Year 5 Semester 9			Year 5 Semester 10		
Required Credits: 18			Required Credits: 16		
MET 5903	Marine Material Technology II	3	MET 5005	Leadership for Chief Engineers	5
MET 5914	Ship Design and Technology	4	MET 5014	Marine Machinery Operations	4
MET 5924	Advanced Marine Engineering Knowledge	4	MET 5024	Advanced Ship Regulation and Survey	4
MET 5934	Marine Engineering Project	4	LSC 2213	English for Leadership	3
LSS 2403	Innovation and Entrepreneurship	3			

Bachelor of Applied Science in Marine Transport

Course Credits

Program Mission

The mission of the degree program is to give education and training to cadets to enable them to pursue a career as a navigating officer at sea. The degree includes the required academic component for the certificates of competency up to Master's level. These certificates will be issued by the Federal Transport Authority once the cadets have sufficient seagoing experience.

Program Description

Accredited by the Commission for Academic Accreditation (CAA) UAE. This program provides students with the necessary education and training to become a navigating (deck) officer onboard ships. It covers the academic components required by the Standards of Training, Certification and Watch Keeping for Seafarers (STCW) international convention of the International Maritime Organization (IMO) up to Master's level.

The program also includes practical seagoing service with guided study, and provided sufficient sea service is obtained by the end of the third year. Students can apply to the Federal Transport Authority for the Certificate of Competency as Officer of the Watch. In order to obtain higher level Certificates of Competency, students will be required to complete the degree program in full and, undertake further seagoing service and apply to the Federal Transport Authority.

Program Student Outcomes

Upon graduation, a HCT graduate in Bachelor of Applied Science in Marine Transport should have the ability to:

- Demonstrate the competency to undertake the tasks, duties and responsibilities of a ship's master
- Demonstrate a knowledge base in relevant marine related topics suitable for a career as a marine professional
- Effectively lead, work and communicate in a team
- Expand knowledge and capabilities through continuing education or other lifelong learning experiences

Completion Requirements

Students seeking the Bachelor of Applied Science in Marine Transport must successfully complete the following requirements:

- Minimum of 160 credits which are divided as follows:
 - Marine Transport Core Courses: 97 credits.
 - Seagoing Service Core Courses: 30 credits.
 - General Studies: 33 credits
- Minimum CGPA of 2.00.

Marine Transport Core Courses

Required Credits: 97		
MTR 1013	Fundamentals of Marine Navigation	3
MTR 1023	Maritime Industry Overview	3
MTR 1033	Nautical Knowledge	3
MTR 2003	Marine Physical Science	3
MTR 2012	Shipboard Operational Leadership	2
MTR 2102	Ship Regulation and Survey	2
MTR 2103	Ship Operational Safety	3
MTR 2203	Near-Coastal Navigation	3
MTR 2303	Ship Characteristics and Maintenance	3
MTR 2314	Marine Navigational Watchkeeping	4
MTR 2324	Marine Electronic Navigation	4
MTR 2332	Ship Manoeuvring and Control	2
MTR 3013	Marine Weather Watchkeeping	3
MTR 3023	Marine Transport Operations	3
MTR 3033	Electronic Chart Display and Information System	3
MTR 3103	Ship Stability and Stress	3
MTR 3113	Ocean Navigation	3
MTR 4024	Leadership in Shipboard Management	4
MTR 4114	Marine Environmental Dynamics	4
MTR 4124	Advanced Techniques in Marine Navigation	4
MTR 4133	Ship Design and Seaworthiness	3
MTR 5003	Ship Operations Project	3
MTR 5004	Shipboard Commercial Operations	4
MTR 5014	Maritime Law and Ship Protection	4
MTR 5023	Ship Administration	3
MTR 5024	Marine Transport Management	4
MTR 5105	Ship Stability and Dynamics	5
MTR 5124	Shipboard Command Operations	4
MTR 5125	Marine Navigation Management	5

Seagoing Service Core Courses

Required Credits: 30		
MTR 1210	Shipboard Support-Level Experience	10
MTR 3010	Shipboard Operational-Level Experience	10
MTR 4010	Shipboard Management-Level Experience	10

General Studies

Required Credits: 33		
English, Arabic or other Languages		15
Humanities or Art		3
Information Technology or Mathematics		3
Natural Sciences		3
The Social or Behavioural Sciences		9

<i>Total Required Credits</i>	<i>160</i>
<i>Maximum Duration of Study</i>	<i>7</i>
<i>Cost Recovery Programme</i>	<i>Yes</i>
<i>Minimum Duration of Study</i>	<i>5</i>
<i>Programme Code</i>	<i>MARTS</i>
<i>Major Code</i>	<i>MTR</i>

Recommended Sequence of Study

Bachelor of Applied Science in Marine Transport

Course Code	Course Title	Course Credits
Year 1 Semester 1		
Required Credits: 18		
LSS 1003	Life and Study Skills	3
LSM 1103	Technical Mathematics	3
MTR 1103	Maritime English Communication	3
MTR 1013	Fundamentals of Marine Navigation	3
MTR 1023	Maritime Industry Overview	3
MTR 1033	Nautical Knowledge	3
Year 1 Summer		
Required Credits: 3		
	Personal Survival Techniques	
	Fire Prevention and Fire Fighting	
	Elementary First Aid	
	Personal Safety & Social Responsibilities	
	Security Awareness Training	
PHY 1103	Physics 1	3
Year 2 Semester 3		
Required Credits: 19		
LSC 1103	Academic Reading and Writing I	3
LSC 1503	Academic Spoken Communication	3
MTR 2003	Marine Physical Science	3
MTR 2012	Shipboard Operational Leadership	2
MTR 2102	Ship Regulation and Survey	2
MTR 2103	Ship Operational Safety	3
MTR 2203	Near-Coastal Navigation	3
Year 2 Summer		
Required Credits:		
	Advanced Fire Fighting	
	Proficiency in Survival Craft & Rescue Boats	
	Medical First Aid	
Year 3 Semester 5		
Required Credits: 10		
MTR 3010	Shipboard Operational-Level Experience	10
Year 3 Summer		
Required Credits:		
	Global Maritime Distress and Safety System	

Course Code	Course Title	Course Credits
Year 1 Semester 2		
Required Credits: 10		
MTR 1210	Shipboard Support-Level Experience	10
Year 2 Semester 4		
Required Credits: 19		
AES 1003	Emirati Studies	3
LSC 2233	Intercultural Communications in English	3
MTR 2303	Ships Characteristics and Maintenance	3
MTR 2314	Marine Navigational Watchkeeping	4
MTR 2324	Marine Electronic Navigation	4
MTR 2332	Ship Manoeuvring and Control	2
Year 3 Semester 6		
Required Credits: 18		
LSS 2403	Innovation and Entrepreneurship	3
MTR 3013	Marine Weather Watchkeeping	3
MTR 3023	Marine Transport Operations	3
MTR 3033	Electronic Chart Display and Information System	3
MTR 3103	Ship Stability and Stress	3
MTR 3113	Ocean Navigation	3

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Recommended Sequence of Study Bachelor in Applied Science in Marine Transport Cont...

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 10			Required Credits: 18		
MTR 4010	Shipboard Management-Level Experience	10	LSS 1123	Basic Methods of Scientific Research and Development	3
			MTR 4024	Leadership in Shipboard Management	4
			MTR 4114	Marine Environmental Dynamics	4
			MTR 4124	Advanced Techniques in Marine Navigation	4
			MTR 4133	Ship Design and Seaworthiness	3
Year 4 Summer			Year 5 Semester 10		
Required Credits:			Required Credits: 17		
Mandatory Sea Service			LSC 2213	English for Leadership	3
Year 5 Semester 9			MTR 5105	Ship Stability and Dynamics	5
Required Credits: 18			MTR 5124	Shipboard Command Operations	4
MTR 5003	Ships Operations Project	3	MTR 5125	Marine Navigation Management	5
MTR 5004	Shipboard Commercial Operations	4			
MTR 5014	Maritime Law and Ship Protection	4			
MTR 5023	Ship Administration	3			
MTR 5024	Marine Transport Management	4			
Year 5 Summer					
Required Credits:					
Medical Care Course					

Bachelor of Applied Science in Maritime Engineering Technology and Naval Architecture

Program Mission

The mission of the program is to provide knowledge and skills to students in the field of Maritime Engineering and Naval Architecture, to prepare them to contribute to a wide range of maritime related industries in the UAE including: ship building and repair yards; regulatory authorities; classifications societies; ship design consultancies; ship owners, and ports.

Program Description

This program educates students in the field of Maritime Engineering Technology and Naval Architecture, to prepare them to work in a wide range of maritime related industries in the UAE including: the offshore industry; shipyards; classifications societies; ship design consultancies; ship owners, and ports.

Program Student Outcomes

Upon graduation, a HCT graduate in Bachelor of Applied Science in Maritime Engineering Technology and Naval Architecture should have the ability to:

- Carry out a wide range of maritime engineering and ship design functions
- Analyze the performance of ships and maritime structures
- Conduct ship surveys
- Effectively lead, work and communicate in a team
- Expand knowledge and capabilities through continuing education or other lifelong learning experiences
- Serve the community, whether locally, nationally, or globally

Completion Requirements

Students seeking the Bachelor of Applied Science in Maritime Engineering Technology and Naval Architecture must successfully complete the following requirements:

- Minimum of 135 credits which are divided as follows:
 - Major requirements of 32 credits as specified by program core requirements
 - Elective courses requirement of 12 credits
 - Mathematics and Science requirement of 18 credits
 - General Engineering requirement of 40 credits
 - General Studies requirements of 33 credits according to the General Studies breakdown
- Minimum CGPA of 2.00.

Course Credits

Maritime Engineering Technology and Naval Architecture Core Courses

Required Credits: 32		
MAR 2203	Naval Architecture	3
MAR 3103	Marine Machinery Systems	3
MAR 3202	Ship Production	2
MAR 3303	Resistance and Propulsion	3
MAR 3402	Ship Structures I	2
MAR 3503	Design of Ships and Maritime Structures	3
MAR 4805	Maritime Design Project I	5
MAR 4833	Seakeeping and Maneuvering	3
MAR 4865	Maritime Design Project II	5
MAR 4883	Maritime Transportation	3

Maritime Engineering Technology and Naval Architecture Elective Courses

Required Credits: 12		
MAR 4423	Coastal Engineering and Maritime Structures	3
MAR 4433	Offshore Engineering	3
MAR 4443	Ship Production II	3
MAR 4453	Ship Repair	3
MAR 4463	Port Engineering	3
MAR 4803	Ship Structures II	3
MAR 4853	Marine Surveying	3
MAR 4903	Marine Safety	3

Mathematics and Science Required Courses

Required Credits: 18		
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra and Differential Equations	3
MTH 3013	Calculus III	3
PHY 1203	Physics II	3

General Engineering Core Courses**Required Credits: 40**

EEC 2073	Electrical Engineering Fundamentals	3
EGN 1103	Engineering Measurements and CAD Introduction	3
EGN 3103	Project Management	3
EGN 3203	Engineering Economics	3
EMC 2003	Computer Aided Drafting	3
EMC 2013	Materials Selection and Testing	3
EMC 2023	Statics and Dynamics	3
EMC 2033	Manufacturing Technology	3
EMC 2043	Mechanics of Materials	3
EMC 2053	Fluid Mechanics	3
EMC 3003	Industrial Plant Maintenance	3
EMC 3023	Thermodynamics I	3
ERK 3004	Work Placement	4

General Studies Courses**Required Credits: 33**

English, Arabic or other Languages	15
Humanities or Arts	3
Information Technology or Mathematics - MTH 1113 Statistics for Engineering	3
Natural Sciences - PHY 1103 Physics I	3
Social or Behavioral Sciences	9

<i>Total Required Credits</i>	<i>135</i>
<i>Maximum Duration of Study</i>	<i>6 years</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4 years</i>
<i>Program Code</i>	<i>MENBP</i>
<i>Major Code</i>	<i>MAR</i>

Recommended Sequence of Study

Bachelor of Applied Science in Maritime Engineering Technology and Naval Architecture (MENBP)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 18			Required Credits: 18		
AES 1013	Arabic Communications I	3	LSC 2103	Academic Reading and Writing II	3
LSC 1103	Academic Reading and Writing I	3	LSS 1123	Basic Methods of Scientific Research and Development	3
LSS 1003	Life and Study Skills	3	EMC 2003	Computer Aided Drafting	3
EGN 1103	Engineering Measurements and CAD Introduction	3	MTH 1113	Statistics for Engineering	3
MTH 1103	Pre Calculus	3	MTH 1203	Calculus I	3
PHY 1103	Physics I	3	PHY 1203	Physics II	3
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 18			Required Credits: 18		
LSC 2183	English for Specific Purposes	3	EMC 2013	Materials Selection and Testing	3
AES 1003	Emirati Studies	3	EMC 2043	Mechanics of Materials	3
EEC 2073	Electrical Engineering Fundamentals	3	EMC 2053	Fluid Mechanics	3
EMC 2023	Statics and Dynamics	3	EMC 3003	Industrial Plant Maintenance	3
EMC 2033	Manufacturing Technology	3	EMC 3023	Thermodynamics I	3
MTH 2103	Calculus II	3	MTH 2503	Linear Algebra and Differential Equations	3
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 18			Required Credits: 17		
EGN 3203	Engineering Economics	3	MAR 3303	Resistance and Propulsion	3
MTH 3013	Calculus III	3	MAR 3202	Ship Production	2
EGN 3103	Project Management	3	MAR 3402	Ship Structures I	2
MAR 2203	Naval Architecture	3	MAR 3503	Design of Ships and Maritime Structures	3
MAR 3103	Marine Machinery Systems	3	ERK 3004	Work Placement	4
AES 3003	Professional Arabic	3	LSS 2403	Innovation and Entrepreneurship	3
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 14			Required Credits: 14		
MAR 4805	Maritime Design Project I	5	MAR 4865	Maritime Design Project II	5
MAR 4833	Seakeeping and Maneuvering	3	MAR 4883	Maritime Transportation	3
MAR 4XX3	Elective Course	3	MAR 4XX3	Elective Course	3
MAR 4XX3	Elective Course	3	MAR 4XX3	Elective Course	3

Faculty

ABU DHABI MEN'S COLLEGE

Lalin De Silva, Masters Maritime Education and Training (Nautical),
World Maritime University

Jamal Al-Sadi, PhD Mechanical Engineering, University of Ontario
Institute of Technology

Saud Zanbarkji, Master High Sea's, Arab Academy for Science and
Technology and Maritime Transport

Department of Math and Natural Sciences

Mission Statement

The Department of Mathematics and Natural Sciences are committed to serving the needs of the Engineering departments by providing quality education. Emphasis is on using the latest digital courseware, innovation and the application of scientific and technical knowledge to solve real-world problems. The courses are designed to cover both, the conceptual and the practical aspects of learning by providing the students with the right tools that will allow them to enter a career in higher education, industry or government.

Description

The Math and Natural Sciences offer courses in Math, Physics and Chemistry. These courses are part of the core curriculum and fulfil the requirements in the various degrees offered within the Division of Engineering Technology and Science. Emphasis is on innovation and the application of scientific and technical knowledge to solve human problems.

Program Educational Objectives

The Program Educational Objectives of the Department of Mathematics and Natural Sciences are:

1. Develop a firm understanding of the fundamental principles and application of Physics, Mathematics, and Chemistry.
2. Ability to apply basic statistics, calculus, differential equations, and linear techniques
3. Ability to identify, analyze, and solve applied science problems.
4. Develop the students' ability to communicate and work in teams

Faculty

AL AIN MEN'S COLLEGE

- Eyad Adnan**, Masters Mathematics, University of Karachi
Ghassan Malkawi, PhD Mathematics, Universiti Utara Malaysia
Riyad Hussein, PhD Physics, University of Strathclyde

AL AIN WOMEN'S COLLEGE

- Andrew Nyondo**, Masters Mathematics, University of London
Bogdan Schiopu, Masters Management, Universitatea Petrol, Gaze Ploiesti
Haroun Barghouthy, Masters Physics, University of Jordan

ABU DHABI MEN'S COLLEGE

- Abdel-Razzaq Mugdadi**, PhD Mathematical Sciences, Northern Illinois University
Aykut Ulge, Masters Mechanical Engineering, Bosphorus University
Brittany Mitchell, Masters Atmospheric and Space Science, University of Michigan
Dorian Bridi, PhD Engineering Physics, Vienna University of Technology
Hyun Yeun, PhD Mathematics, The University of Sheffield
Jamal Fakih, Master of Science Civil Engineering, University of Toledo
Kattayat Sandhya, Masters Physics, University of Calicut
Khaled Manasrah, PhD Mathematics, Southern Illinois University
Khaled Shawakfeh, PhD Chemistry, Temple University
Manuel Eusebio, PhD Science Education (Mathematics), De la Salle University
Manuela Zarifeh, Masters Civil Engineering, Concordia University
Marianne Tarun, PhD Materials Science and Engineering, Washington State University
Nabila Azzam, PhD Mathematics, University of Manchester
Osman Elawad, PhD Science-Material Physics, University of Claude Bernard
Renuka Seenivasan, PhD Physics, Bharathidasan University
Roque Batulan, PhD Mathematics Education, Centro Escolar University
Ziad Raffi, Masters Statistics, Business and Computer University

ABU DHABI WOMEN'S COLLEGE

- Amil Karimov**, PhD Mathematics, Leningrad State University
Samaila Waje, PhD Physics, Universiti Putra Malaysia

DUBAI MEN'S COLLEGE

- Ghada Ali**, Masters Information Technology, University of Southern Queensland
Gomathy Krishnan, Masters Physics, Madurai Kamaraj University
Hala El Minawi, Masters Mathematics, University of Alberta
Lakshmi Priya Krishnan, Masters Mathematics, University of Madras
Mohammad Marashdeh, PhD Fuzzy Mathematics, National University of Malaysia (UKM)
Neha Gupta, Masters Physics, Guru Nanak Dev University
Osama Abdelbagi, Masters Energy, Heriot Watt University
Safa Ismail, Masters Mathematics, University of Calgary
Salti Samarah, PhD Mathematics, University of Connecticut

DUBAI WOMEN'S COLLEGE

- John Brown (Teye)**, PhD Computational Analysis and Modelling, Louisiana Technology University

FUJAIRAH MEN'S COLLEGE

- Smitha Josey**, Masters Physics, Mahatma Gandhi University
Suhas Poyyilveetil, PhD Physics, Indian Institute of Technology, Madras

FUJAIRAH WOMEN'S COLLEGE

- Christina Apostolopoulou**, PhD Pure Mathematics-Algebra

(Representation Theory), University of Antwerp

- Jess Claire Sanchez**, Masters of Applied Mathematics, University of South Eastern Philippines
Roy Forrest, PhD Physics, University of Surrey

RAS AL KHAIMAH MEN'S COLLEGE

- Cristina Vargancsik**, Masters Mathematics, Alexandru Ioan Cuza University
Hicham Itani, Masters Applied Mathematics, Southern Methodist University
Rami Alahmad, PhD Applied Mathematics, University of Alabama at Birmingham
Stojan Rendevski, PhD Physics, SC and Methodius University of Skopje
Wael Sharaf, Masters Mathematics, The Lebanese University
Walid El-Jammal, EdD Education, Wilmington University, Delaware

RAS AL KHAIMAH WOMEN'S COLLEGE

- Ahmad Abdelhadi**, PhD Physics, Clemson University
Douglas Daniels, Masters Mathematics, The University of Mississippi

SHARJAH MEN'S COLLEGE

- Abdelghani Taouti**, Masters Telecommunication Engineering, Victoria University
Hafida Sehil, PhD Physics, University of Rennes 1
Hamidullah Farhat, PhD Theoretical Nuclear Physics, Hampton University
Leesal Iype, PhD Physics, Mahatma Gandhi University
Shafiek Ally, Masters Education, University of Southern Queensland

SHARJAH WOMEN'S COLLEGE

- Alina Barbulescu**, PhD Mathematics, Alexandru Ioan Cuza University
Amer Al-Jarrah, PhD Applied Radiation Physics, University Sains Malaysia
Ihab Abdelwahed, Masters Mathematical Science, Tennessee State University
Neveen Amin Farag, Masters Engineering Mathematics, Mansoura University
Sajan Samuel, Masters Mathematics, Annamalai University
Seema Karkain, PhD Chemistry, University of South Florida
Suhaila Alhosany, Masters Mathematics, Southern University, Baton Rouge
Tamar Krikorian, Masters Applied Mathematics, Ryerson University

WESTERN REGION COLLEGES

- Gratchia Mkrtrchian**, PhD Applied Science, G. S Petrov Plastics Institute
Henrieta Clara, Masters Mathematics, Manuel L. Quezon University

Department of Mechanical Engineering Technology (MCET)

Bachelor of Mechanical Engineering Technology (BMCET)

Program Mission

Mechanical Engineering Technology program serves its students, alumni, industry and society by fulfilling the missions of discovery and innovation. This is achieved through effective application of state of the art engineering methods and professional standards relevant to the practice of mechanical engineering profession.

Program Description

The Bachelor of Mechanical Engineering Technology program provides an excellent broad education with a focused area of specialization options to cater for the global UAE industry. Mechanical engineering technology graduates are trained to support the design, development, and maintenance of mechanical, static as well as rotating equipment. The program also teaches them to develop effective energy solutions, and manufacture and maintain state of the art equipment. HCT Mechanical engineers are trained to use state of the art software and hardware to rapidly prototype and test potential product design, computerized testing and measurements, and computer control of machinery.

The Bachelor of Mechanical Engineering Technology curriculum produces high-quality engineers known for productivity, timeliness, dedication, and competence in the workplace. Graduates have the ability to work logically, accurately and efficiently; to gather and use information effectively; and to continue enhancing their careers through lifelong learning. The program stresses the effective use of technology, information resources and engineering tools. The program instills leadership qualities based on moral and ethical principles coupled with sound and rational judgment. Finally, the program is designed to prepare interested students for graduate studies in mechanical engineering technology and other areas of professional practice.

This program offers elective concentrations in:

- **Power**
- **Design and Manufacturing**

Students will have the option to graduate with a Diploma in Mechanical Engineering Technology upon the successful completion of 80 credits inclusive of the 8 week Work Placement.

Program Educational Objectives

The Program Educational Objectives of the Bachelor of Mechanical Engineering Technology program are to:

1. Provide Mechanical Engineering professionals who are equipped with the technical knowledge and skills required by the industry to develop, design, and maintain mechanical systems to highest level of industry standards.
2. Prepare graduates for a successful career as effective decision makers with strong communication and teamwork skills and an understanding of the global, ethical and social implications of the industry and Mechanical Engineering profession.
3. Provide graduates with strong commitment to lifelong learning, continuing education, and professional growth.
4. Provide graduates with leadership qualities and commitment to contribute actively to achieving the Abu Dhabi Vision 2030.

Program Student Outcomes

Upon graduation, a HCT graduate in Bachelor of Mechanical Engineering Technology should demonstrate:

- a. An ability to select and apply the knowledge, techniques, skills, and modern tools of mechanical engineering to broadly-defined engineering technology activities.
- b. An ability to select and apply a knowledge of mathematics, science, engineering, and technology to mechanical engineering technology problems that require the application of principles and applied procedures or methodologies.
- c. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
- d. An ability to design systems, components, or processes for broadly-defined mechanical engineering technology problems appropriate to program educational objectives.
- e. An ability to function effectively as a member or leader on a technical team.
- f. An ability to identify, analyze, and solve broadly-defined mechanical engineering technology problems.
- g. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- h. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- i. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
- j. A knowledge of the impact of engineering technology solutions in a societal and global context.
- k. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Bachelor of Mechanical Engineering Technology degree must successfully complete the following minimum requirements:

1. A minimum of 146 credits, as follows:
 - a. A minimum 92 credits of major requirements as follows:
 - Minimum of 74 core courses including Work Placement for 16 weeks
 - Minimum of 18 credits of major electives
 - b. A minimum of 21 credits of Math and Science requirements
 - c. A minimum of 33 credits of General Studies requirements according to the General Studies breakdown and as advised in the study plan of the program.
2. A minimum CGPA of 2.00.

Course Credits

Core Courses**Required Credits: 74**

EGN 1133	Design Thinking in Technology	3
EGN 2712	Applied Programing for Engineers	2
EGN 2806	Work Placement I	6
EGN 3012	Project Management	2
EGN 3212	Economics for Engineering	2
EGN 3806	Work Placement II	6
ELE 2153	Electrical Engineering Fundamentals	3
MCE 2203	Applied Statics	3
MCE 2213	Mechanics of Materials	3
MCE 2223	Applied Dynamics	3
MCE 2303	Material Selection and Testing	3
MCE 2311	Solid Modelling	1
MCE 2323	Manufacturing Technology I	3
MCE 2332	Geometric Dimensioning and Tolerancing	2
MCE 2403	Thermodynamics	3
MCE 2903	Sophomore Design Project	3
MCE 3203	Applied Mechanical Vibration	3
MCE 3303	Manufacturing Technology II	3
MCE 3403	Fluid Mechanics	3
MCE 3413	Applied Heat Transfer	3
MCE 3503	Mechanical Design	3
MCE 3513	Machine Elements and Mechanisms	3
MCE 3601	Engineering Measurements Lab	1
MCE 4603	Control Systems	3
MCE 4902	Capstone Design Project I	2
MCE 4912	Capstone Design Project II	2

General Studies Courses**Required Credits: 33**

English, Arabic or other Languages	15
Humanities or Arts : AES 1003 Emirati Studies	3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering	3
Natural Sciences: PHY 1103 Physics I	3
Social or Behavioral Sciences	9

Major Elective Courses

Course Credits

Required Credits: 18**Power Concentration (MPR)**

Concentration Core		
MCE 3343	Industrial Plant Maintenance	3
MCE 4403	Refrigeration and Air Conditioning System	3
MCE 4413	Turbomachinery	3
MCE 4423	Power Plant Engineering	3
Concentration Electives		
EGN 4333	Renewable Energy Systems	3
MCE 4433	Internal Combustion Engines	3
MCE 4443	Computational Fluid Dynamics	3
MCE 4453	Desalination Engineering	3
MCE 4463	Energy Conservation and Management	3
MCE 4503	Finite Element Analysis	3
MCE 4863	Special Topics in Mechanical Engineering	3
MCE 4893	Directed Study	3

Design and Manufacturing Concentration (DMF)

Concentration Core		
MCE 4303	Computer Integrated Manufacturing	3
MCE 4313	Advanced Geometric Dimensioning and Tolerancing	3
MCE 4513	Integrated Design for Manufacture and Assembly	3
Concentration Electives		
MCE 3343	Industrial Plant Maintenance	3
MCE 3613	Fluid Power	3
MCE 4323	Non Destructive Testing	3
MCE 4333	Production Planning and Control	3
MCE 4613	Robotics and Automation	3
MCE 4623	Introduction to Mechatronics	3
MCE 4863	Special Topics in Mechanical Engineering	3
MCE 4893	Directed Study	3

Mathematics and Science Courses**Required Credits: 21**

CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra and Differential Equations	3
MTH 3013	Calculus III	3
PHY 1203	Physics II	3

<i>Total Required Credits</i>	146
<i>Maximum Duration of Study</i>	6 years
<i>Cost Recovery Program</i>	No
<i>Minimum Duration of Study</i>	4 years
<i>Program Code</i>	BM CET
<i>Major Code</i>	MCE

Diploma in Mechanical Engineering Technology (DMCET) Exit Option

Program Educational Objectives

The Program Educational Objectives of the Diploma in Mechanical Engineering Technology program are to:

1. Provide Mechanical Engineering professionals who are equipped with the technical knowledge and skills required by the industry to maintain mechanical systems to highest level of industry standards.
2. Prepare graduates for a successful career with strong communication and teamwork skills and an understanding of the global, ethical and social implications of the industry and Mechanical Engineering profession.
3. Provide graduates with strong commitment to lifelong learning, continuing education, and professional growth.
4. Provide graduates with the commitment to contribute actively to achieving the Abu Dhabi Vision 2030.

Program Student Outcomes

Upon graduation, a HCT graduate in Diploma in Mechanical Engineering Technology should demonstrate:

- a. An ability to apply the knowledge, techniques, skills, and modern tools of mechanical engineering to narrowly defined engineering technology activities.
- b. An ability to apply a knowledge of mathematics, science, engineering, and technology to mechanical engineering technology problems that require limited application of principles but extensive practical knowledge.
- c. An ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments.
- d. An ability to function effectively as a member of a technical team.
- e. An ability to identify, analyze, and solve narrowly defined mechanical engineering technology problems.
- f. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- g. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- h. An understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity.
- i. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Diploma in Mechanical Engineering Technology degree must successfully complete the following minimum requirements:

1. A minimum of 80 credits, as follows:
 - a. 41 credits of major requirements, including Work Placement for 8 weeks
 - b. Minimum of 15 credits of Math and science

requirements

- c. Minimum of 24 credits of General Studies requirements according to the General Studies breakdown and as advised in the study plan of the program.
2. A minimum CGPA of 2.00.

Course Credits

Core Courses		
Required Credits: 41		
EGN 1133	Design Thinking in Technology	3
EGN 2712	Applied Programing for Engineers	2
EGN 2806	Work Placement I	6
ELE 2153	Electrical Engineering Fundamentals	3
MCE 2203	Applied Statics	3
MCE 2213	Mechanics of Materials	3
MCE 2303	Material Selection and Testing	3
MCE 2311	Solid Modelling	1
MCE 2323	Manufacturing Technology I	3
MCE 2332	Geometric Dimensioning and Tolerancing	2
MCE 2403	Thermodynamics	3
MCE 2903	Sophomore Design Project	3
MCE 3343	Industrial Plant Maintenance	3
MCE 3613	Fluid Power	3

Mathematics and Science Courses

Required Credits: 15		
CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
PHY 1203	Physics II	3

General studies Courses

Required Credits: 24		
English, Arabic or other Languages		9
Humanities or Arts : AES 1003 Emirati Studies		3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering		3
Natural Sciences: PHY 1103 Physics I		3
Social or Behavioral Sciences		6

Total Required Credits	80
Maximum Duration of Study	3 years
Cost Recovery Program	No
Minimum Duration of Study	2 years
Program Code	DMCET
Major Code	MCE

Recommended Sequence of Study

Bachelor of Mechanical Engineering Technology

Course Code	Course Title	Course Credits
Year 1 Semester 1		
Required Credits: 15		
LSC 1103	Academic Reading and Writing I	3
LSS 1003	Life and Study Skills	3
PHY 1103	Physics I	3
EGN 1133	Design Thinking in Technology	3
MTH 1103	Pre Calculus	3
Year 1 Summer Semester		
Required Credits: 6		
AES 1013	Arabic Communications I	3
CHM 1103	Engineering Chemistry	3
Year 2 Semester 3		
Required Credits: 16		
AES 1003	Emirati Studies	3
ELE 2153	Electrical Engineering Fundamentals	3
MTH 2103	Calculus II	3
MCE 2203	Applied Statics	3
MCE 2303	Material Selection and Testing	3
MCE 2311	Solid Modelling	1
Year 2 Summer Semester (Diploma)		
Required Credits: 6		
MCE 3343	Industrial Plant Maintenance	3
MCE 3613	Fluid Power	3
Year 2 Summer Semester (Bachelor)		
Required Credits: 6		
MTH 2503	Linear Algebra and Differential Equations	3
MCE 2223	Applied Dynamics	3
Year 3 Semester 5		
Required Credits: 15		
LSC 2183	English for Specific Purposes	3
MTH 3013	Calculus III	3
MCE 3403	Fluid Mechanics	3
MCE 3503	Mechanical Design	3
MCE 3303	Manufacturing Technology II	3
Year 3 Summer Semester		
Required Credits: 6		
EGN 3806	Work Placement II	6
Year 4 Semester 7		
Required Credits: 16		
EGN 3012	Project Management	2
MCE 4603	Control Systems	3
MCE 4XX3	Major Elective	3
MCE 4XX3	Major Elective	3
MCE 4XX3	Major Elective	3
MCE 4902	Capstone Design Project I	2

Course Code	Course Title	Course Credits
Year 1 Semester 2		
Required Credits: 15		
LSC 2103	Academic Reading and Writing II	3
MTH 1113	Statistics for Engineering	3
MTH 1203	Calculus I	3
PHY 1203	Physics II	3
LSS 1123	Basic Methods of Scientific Research and Development	3
Year 2 Semester 4		
Required Credits: 16		
EGN 2712	Applied Programming for Engineers	2
MCE 2403	Thermodynamics	3
MCE 2903	Sophomore Design Project	3
MCE 2213	Mechanics of Materials	3
MCE 2323	Manufacturing Technology I	3
MCE 2332	Geometric Dimensioning and Tolerancing	2
Year 2 Summer Semester (Diploma)		
Required Credits: 6		
EGN 2806	Work Placement I	6
Year 2 Summer Semester (Bachelor)		
Required Credits: 6		
EGN 2806	Work Placement I	6
Year 3 Semester 6		
Required Credits: 15		
LSS 2403	Innovation and Entrepreneurship	3
MCE 3513	Machine Elements and Mechanisms	3
EGN 3212	Economics for Engineering	2
MCE 3413	Applied Heat Transfer	3
MCE 3203	Applied Mechanical Vibration	3
MCE 3601	Engineering Measurements Lab	1
Year 4 Semester 8		
Required Credits: 14		
AES 3003	Professional Arabic	3
MCE 4XX3	Major Elective	3
MCE 4XX3	Major Elective	3
MCE 4XX3	Major Elective	3
MCE 4912	Capstone Design Project II	2

Faculty

AL AIN MEN'S COLLEGE

Abdulwehab Ibrahim, PhD Mechanical Engineering, Universiti Teknologi PETRONAS

Hussien Alwedyan, PhD Mechanical Engineering, Concordia University

Nisar Qureshi, PhD Mechanical Engineering, The University of Sheffield

Rihana Ishaq, PhD Mechanical Engineering, University of Leeds

Soon Chul Ahn, Masters Mechanical Engineering, Changwon National University

Younes Al Younes, Masters Mechatronics Engineering Technology, American University of Sharjah

ABU DHABI MEN'S COLLEGE

Chandramohan Somayaji, PhD Mechanical Engineering, Mississippi State University

Fouad Kouddi, Masters Mechanical Engineering, Concordia University

Hussni Al Hajjar, PhD Mechanical Engineering, University of Bradford

Jamal Al-Sadi, PhD Mechanical Engineering, University of Ontario Institute of Technology

Jamal Mian, PhD Marine Engineering, Nagasaki University

Kamel Adref, PhD Mechanical Engineering, The University of Sheffield

Khalid Zouhri, PhD Mechanical Engineering, Michigan Technological University

Luis Ferreira, PhD Mechanical Engineering, University of Seville

Mohamad Sharis Abdul Karim, PhD Mechanical and Manufacturing Engineering, Loughborough University

Molham Al Souk, PhD Mechanical Engineering, Concordia University

Mongi Mansouri, PhD Mechanical Engineering, Louisiana State University

Monsif Shinneeb, PhD Mechanical Engineering, University of Saskatchewan

Nazar Abdelkarim, PhD Aeronautical and Automotive Engineering, Loughborough University

Omar Khondker, PhD Aerospace Engineering, Royal Melbourne Institute of Technology (RMIT) University

Yasser El Okda, PhD Mechanical Engineering, Virginia Polytechnic Institute and State University

Yassin Nimir, PhD Mechanical Engineering (Applied Mechanics), University of Sussex

Zareena Gani, PhD Mechanical Engineering, McMaster University

DUBAI MEN'S COLLEGE

Abdul Mannan Bhatti, Masters Industrial Engineering, University of New South Wales

Amar Khoukhi, PhD Mechanical Engineering, University de Montreal

Fouad Mattar, Masters Control Systems and Information Technology, University of Manchester

George Alexopoulos, Masters Mechanical Engineering, National Technical University of Athens

Madhat Abdeljawad, PhD Aerospace Engineering, University of Queensland

Mohammad-Amin Al Jarrah, PhD Aeronautics and Astronautics, Stanford University

Mohammad Molhim, PhD Mechanical Engineering, Concordia University

Nasir Akhtar, Masters Gun Systems Design, Cranfield University

Pradeep Hegde, PhD Mechanical Engineering, University Sains Malaysia

Sandor Piros, PhD Mechanical Engineering, Budapest University of Technology and Economics

V Srinivas Rao, Masters Mechanical Engineering, Rochester Institute of Technology

Yasser Elkady, PhD Mechanical Engineering, Auburn University

FUJAIRAH MEN'S COLLEGE

Amjad Alsakaneh, PhD Mechanical Engineering, Cork Institute of

Technology

Anil Midathada, PhD Mechanical Engineering, Banaras Hindu University

Fesmi Abdul Majeed, PhD Mechatronics Engineering, Loughborough University

Laith Al Juboori, PhD Production Engineering, University of Technology-Baghdad

Mazin Abuharaz, PhD Aerospace Engineering, Old Dominion University

FUJAIRAH WOMEN'S COLLEGE

Ashraf Shalalfeh, Masters Mechanical Engineering, University of Jordan

Lina Momani, PhD Mechatronics Engineering, University of Liverpool

RAS AL KHAIMAH MEN'S COLLEGE

Ahmed Khodary, PhD Electrical Engineering Technology, New Mexico State University

Josefa Wivou, Masters Manufacturing, University of New South Wales

Juan P Barrera, Masters Engineering, Kingston University

Lanka Udawatta, PhD Engineering Technology, Saga University

Mesfin Gizaw Zewge, PhD STEP Compliant Approach for Turn-Mill Operations, Universiti Teknologi Petronas

Mohammad Al Wedian, Masters Industrial Automation Engineering, Yarmouk University

Mohammed Khalik, Masters Mechanical Engineering, University of Technology, Iraq

Nitin Afzulpurkar, PhD Mechanical Engineering, University of Canterbury

Sabin Kumar Mishra, PhD Mechanical Engineering, Indian Institute of Technology, Roorkee

Silvia Miu, PhD Mechanical Engineering, Politehnica University of Bucharest

RAS AL KHAIMAH WOMEN'S COLLEGE

Sanjeeva Witharana, PhD Nanothermal Engineering, University of Leeds

SHARJAH MEN'S COLLEGE

Abdul Syed, Master of Applied Science (Research) Mechanical Engineering, McMaster University

Abed Mennad, Masters Mechanical Engineering, Cape Technikon

Altaf Khan, Masters Heat Power Engineering, Mangalore University

Hassan Abdulmouti, PhD Engineering, University of Fukui

Mohammad Kilani, PhD Mechatronics Engineering, Florida State University

Najeeb Khan, PhD Mechanical Engineering, Kakatiya University

Vijay Varade, PhD Mechanical Engineering, Indian Institute of Technology, Bombay

SHARJAH WOMEN'S COLLEGE

Ayman Ramadan, Master Mechanical Engineering, Al Mustansiriya University- Iraq

Mazhar Azeem, Masters Mechanical Engineering, Bradley University

Thomas Selerland, PhD Mechanical Engineering, University of California

WESTERN REGION COLLEGES

Ranjeet Ranjan, PhD Engineering, Birla Institute of Technology and Science

Hasan Fawad, PhD Mechanical Engineering, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology

Sathyan Krishnan, PhD Mechanical Engineering, University of South Australia

Department of Mechatronics Engineering Technology (MTET)

Bachelor of Mechatronics Engineering Technology (BMTET)

Program Mission

Mechatronics Engineering Technology program serves its students and alumni, industry and society by fulfilling the missions of discovery and innovation, effective application of state of the art engineering methods and professional standards relevant to the practice of Mechatronics engineering profession.

Program Description

The Bachelor of Mechatronics Engineering Technology program provides an excellent broad education with a focused area of specializations options to cater for the global UAE industry. Mechatronics engineering technology graduates are trained to support design, development, and maintenance of mechatronics systems, develop effective solutions of industrial needs, and manufacture and maintain state of the art automated systems. HCT Mechatronics engineers are trained to use state of the art software and hardware to rapidly prototype and test potential product design, computerized testing and measurements, and computer control of machinery.

The Bachelor of Mechatronics Engineering Technology curriculum produces high-quality engineers known for productivity, timeliness, dedication, and competence in the workplace. Graduates have the ability to work logically, accurately and efficiently; to gather and use information effectively; and to continue enhancing their careers through lifelong learning. The program stresses the effective use of technology, information resources and engineering tools. The program instills leadership qualities based on moral and ethical principles coupled with sound and rational judgment. Finally, the program is designed to prepare interested students for graduate studies in mechatronics engineering and other areas of professional practice.

Students will have the option to graduate with a Diploma in Mechatronics Engineering Technology upon the successful completion of 80 credits inclusive of the 8 week Work Placement.

Program Educational Objectives

The Program Educational Objectives of the Bachelor of Mechatronics Engineering Technology program are to:

1. Provide Mechatronics engineering professionals with the technical knowledge and skills required by the industry to develop, design, and maintain mechatronics systems to highest level of industry standards.
2. Prepare graduates for a successful career as effective decision makers with strong communication and

teamwork skills and an understanding of the global, ethical and social implications of the industry and Mechatronics Engineering profession.

3. Provide graduates with strong commitment to lifelong learning, continuing education, and professional growth.
4. Provide graduates with leadership qualities and commitment to contribute actively to achieving the Abu Dhabi Vision 2030.

Program Student Outcomes

Upon graduation, a HCT graduate in Bachelor of Mechatronics Engineering Technology should demonstrate:

- a. An ability to select and apply the knowledge, techniques, skills, and modern tools of mechatronics engineering to broadly-defined engineering technology activities.
- b. An ability to select and apply a knowledge of mathematics, science, engineering, and technology to mechatronics engineering technology problems that require the application of principles and applied procedures or methodologies.
- c. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
- d. An ability to design systems, components, or processes for broadly-defined mechatronics engineering technology problems appropriate to program educational objectives.
- e. An ability to function effectively as a member or leader on a technical team.
- f. An ability to identify, analyze, and solve broadly-defined mechatronics engineering technology problems.
- g. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- h. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- i. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
- j. A knowledge of the impact of engineering technology solutions in a societal and global context.
- k. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Bachelor of Mechatronics Engineering Technology degree must successfully complete the following minimum requirements:

1. A minimum of 146 credits, as follows:
 - a. A minimum 92 credits of major requirements as follows:

- Minimum of 80 core courses including Work Placement for 16 weeks
 - Minimum of 12 credits of major electives
 - b. A minimum of 21 credits of Math and science requirements
 - c. A minimum of 33 credits in General Studies requirements according to the General Studies breakdown and as advised in the study plan of the program.
2. A minimum CGPA of 2.00.

Course Credits

Major Elective Courses

Required Credits: 12

MCE 3343	Industrial Plant Maintenance	3
MCE 3613	Fluid Power	3
MTE 4503	Design of Mechatronic Systems	3
MTE 4623	Industrial Automation	3
MTE 4633	Process Control	3
MTE 4643	Digital Control Systems	3
MTE 4653	Real Time Embedded Systems	3
MTE 4863	Special Topics in Mechatronics Engineering	3
MTE 4893	Directed Study	3

Mathematics and Science courses

Required credits: 21

CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra and Differential Equations	3
MTH 3013	Calculus III	3
PHY 1203	Physics II	3

General Studies courses

Required credits: 33

English, Arabic or other Languages	15
Humanities or Arts: AES 1003 Emirati Studies	3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering	3
Natural Sciences: PHY 1103 Physics I	3
Social or Behavioral Sciences	9

Course Credits

Core Courses

Required credits: 80

EGN 1133	Design Thinking in Technology	3
EGN 2712	Applied Programing for Engineers	2
EGN 2806	Work Placement I	6
EGN 3012	Project Management	2
EGN 3212	Economics for Engineering	2
EGN 3806	Work Placement II	6
ELE 2153	Electrical Engineering Fundamentals	3
MCE 2203	Applied Statics	3
MCE 2213	Mechanics of Materials	3
MCE 2223	Applied Dynamics	3
MCE 2303	Material Selection and Testing	3
MCE 2311	Solid Modelling	1
MCE 2323	Manufacturing Technology I	3
MCE 3203	Applied Mechanical Vibrations	3
MCE 3503	Mechanical Design	3
MCE 4603	Control Systems	3
MTE 2403	Thermofluid Systems	3
MTE 2602	Mechatronics Measurements and Troubleshooting	2
MTE 2903	Sophomore Design Project	3
MTE 3503	Electronics Product Design	3
MTE 3603	Electronics Systems and Circuits	3
MTE 3611	Electronics Systems and Circuits Lab	1
MTE 3623	Microcontroller Systems	3
MTE 3633	Sensors and Actuators	3
MTE 4603	Robotics Technology	3
MTE 4613	Industrial Control Systems	3
MTE 4902	Capstone Design Project I	2
MTE 4912	Capstone Design Project II	2

<i>Total Required Credits</i>	<i>146</i>
<i>Maximum Duration of Study</i>	<i>6 years</i>
<i>Cost Recovery Program</i>	<i>No</i>
<i>Minimum Duration of Study</i>	<i>4 years</i>
<i>Program Code</i>	<i>BMTET</i>
<i>Major Code</i>	<i>MTE</i>

Diploma in Mechatronics Engineering Technology (DMTET) Exit Option

Program Educational Objectives

The Program Educational Objectives of the Diploma in Mechatronics Engineering Technology program are to:

1. Provide Mechatronics engineering professionals with the technical knowledge and skills required by the industry to maintain mechatronics systems to highest level of industry standards.
2. Prepare graduates for a successful career with strong communication and teamwork skills and an understanding of the global, ethical and social implications of the industry and Mechatronics Engineering profession.
3. Provide graduates with strong commitment to lifelong learning, continuing education, and professional growth.
4. Provide graduates with the commitment to contribute actively to achieving the Abu Dhabi Vision 2030.

Program Student Outcomes

Upon graduation, a HCT graduate in Diploma in Mechatronics Engineering Technology should demonstrate:

- a. An ability to apply the knowledge, techniques, skills, and modern tools of mechatronics engineering to narrowly defined engineering technology activities.
- b. An ability to apply a knowledge of mathematics, science, engineering, and technology to mechatronics engineering technology problems that require limited application of principles but extensive practical knowledge.
- c. An ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments.
- d. An ability to function effectively as a member of a technical team.
- e. An ability to identify, analyze, and solve narrowly defined mechatronics engineering technology problems.
- f. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- g. An understanding of the need for and an ability to engage in self-directed continuing professional development.
- h. An understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity.
- i. A commitment to quality, timeliness, and continuous improvement.

Completion Requirements

Students seeking the Diploma in Mechatronics Engineering Technology degree must successfully complete the following minimum requirements:

1. A minimum of 80 credits, as follows:
 - 41 credits of major requirements, including Work Placement for 16 weeks
 - A minimum of 15 credits of Math and science requirements

- A minimum of 24 credits in General Studies requirements according to the General Studies breakdown and as advised in the study plan of the program.
2. A minimum CGPA of 2.00.

Core Courses

Required credits: 41

EGN 1133	Design Thinking in Technology	3
EGN 2712	Applied Programming for Engineers	2
EGN 2806	Work Placement I	6
ELE 2153	Electrical Engineering Fundamentals	3
MCE 2203	Applied Statics	3
MCE 2213	Mechanics of Materials	3
MCE 2303	Material Selection and Testing	3
MCE 2311	Solid Modelling	1
MCE 2323	Manufacturing Technology I	3
MCE 3343	Industrial Plant Maintenance	3
MCE 3613	Fluid Power	3
MTE 2403	Thermofluid systems	3
MTE 2602	Mechatronics Measurements and Troubleshooting	2
MTE 2903	Sophomore Design Project	3

Mathematics and Science courses

Required credits: 15

CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
PHY 1203	Physics II	3

General Studies courses

Required credits: 24

English, Arabic or other Languages	9
Humanities or Arts: AES 1003 Emirati Studies	3
Information Technology or Mathematics: MTH 1113 Statistics for Engineering	3
Natural Sciences: PHY 1103 Physics I	3
Social or Behavioral Sciences	6

Total Required Credits	80
Maximum Duration of Study	3 years
Cost Recovery Program	No
Minimum Duration of Study	2 years
Program Code	DMTET
Major Code	MTE

Recommended Sequence of Study

Bachelor of Mechatronics Engineering Technology

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
LSC 1103	Academic Reading and Writing I	3	LSC 2103	Academic Reading and Writing II	3
LSS 1003	Life and Study Skills	3	MTH 1113	Statistics for Engineering	3
PHY 1103	Physics I	3	MTH 1203	Calculus I	3
EGN 1133	Design Thinking in Technology	3	PHY 1203	Physics II	3
MTH 1103	Pre Calculus	3	LSS 1123	Basic Methods of Scientific Research and Development	3
Year 1 Summer Semester			Year 2 Semester 4		
Required Credits: 6			Required Credits: 16		
AES 1013	Arabic Communications I	3	EGN 2712	Applied Programing for Engineers	2
CHM 1103	Engineering Chemistry	3	MTE 2403	Thermofluid Systems	3
Year 2 Semester 3			Year 2 Summer Semester (Diploma)		
Required Credits: 16			Required Credits: 6		
AES 1003	Emirati Studies	3	EGN 2806	Work Placement I	6
ELE 2153	Electrical Engineering Fundamentals	3	Year 2 Summer Semester (Bachelor)		
MTH 2103	Calculus II	3	Required Credits: 6		
MCE 2203	Applied Statics	3	EGN 2806	Work Placement I	6
MCE 2303	Material Selection and Testing	3	Year 3 Semester 6		
MCE 2311	Solid Modelling	1	Required Credits: 15		
Year 2 Summer Semester (Diploma)			Year 3 Semester 5		
Required Credits: 6			Required Credits: 16		
MCE 3343	Industrial Plant Maintenance	3	LSC 2183	English for Specific Purposes	3
MCE 3613	Fluid Power	3	MTH 3013	Calculus III	3
Year 2 Summer Semester (Bachelor)			Year 3 Summer Semester		
Required Credits: 6			Required Credits: 6		
MTH 2503	Linear Algebra and Differential Equations	3	EGN 3806	Work Placement II	6
MCE 2223	Applied Dynamics	3	Year 4 Semester 7		
Year 3 Semester 5			Required Credits: 15		
Required Credits: 16			Required Credits: 14		
LSC 2183	English for Specific Purposes	3	AES 3003	Professional Arabic	3
MTH 3013	Calculus III	3	MTE 4912	Capstone Design Project II	2
MTE 3603	Electronics Systems and Circuits	3	MTE 4XX3	Major Elective	3
MCE 3503	Mechanical Design	3	MTE 4XX3	Major Elective	3
MCE 3203	Applied Mechanical Vibration	3	MTE 4613	Industrial Control Systems	3
MTE 3611	Electronics Systems and Circuits Lab	1	Year 4 Semester 8		
Year 3 Summer Semester			Required Credits: 14		
Required Credits: 6			Required Credits: 15		
EGN 3806	Work Placement II	6	EGN 3212	Economics for Engineering	2
Year 4 Semester 7			EGN 3012	Project Management	2
Required Credits: 15			MTE 4603	Robotics Technology	3
EGN 3212	Economics for Engineering	2	MTE 4XX3	Major Elective	3
EGN 3012	Project Management	2	MTE 4XX3	Major Elective	3
MTE 4603	Robotics Technology	3	MTE 4902	Capstone Design Project I	2
MTE 4XX3	Major Elective	3			
MTE 4XX3	Major Elective	3			
MTE 4902	Capstone Design Project I	2			

Faculty

DUBAI MEN'S COLLEGE

Abdul Mannan Bhatti, Masters Industrial Engineering, University of New South Wales

Amar Khoukhi, PhD Mechanical Engineering, University de Montreal

Fouad Mattar, Masters Control Systems and Information Technology, University of Manchester

George Alexopoulos, Masters Mechanical Engineering, National Technical University of Athens

Madhat Abdeljawad, PhD Aerospace Engineering, University of Queensland

Mohammad-Amin Al Jarrah, PhD Aeronautics and Astronautics, Stanford University

Mohammad Molhim, PhD Mechanical Engineering, Concordia University

Nasir Akhtar, Masters Gun Systems Design, Cranfield University

Pradeep Hegde, PhD Mechanical Engineering, University Sains Malaysia

Sandor Piros, PhD Mechanical Engineering, Budapest University of Technology and Economics

V Srinivas Rao, Masters Mechanical Engineering, Rochester Institute of Technology

Yasser Elkady, PhD Mechanical Engineering, Auburn University

RAS AL KHAIMAH MEN'S COLLEGE

Ahmed Khodary, PhD Electrical Engineering Technology, New Mexico State University

Josefa Wivou, Masters Manufacturing, University of New South Wales

Juan P Barrera, Masters Engineering, Kingston University

Lanka Udawatta, PhD Engineering Technology, Saga University

Mesfin Gizaw Zewge, PhD STEP Compliant Approach for Turn-Mill Operations, Universiti Teknologi Petronas

Mohammad Al Wedian, Masters Industrial Automation Engineering, Yarmouk University

Mohammed Khalik, Masters Mechanical Engineering, University of Technology, Iraq

Nitin Afzulpurkar, PhD Mechanical Engineering, University of Canterbury

Sabin Kumar Mishra, PhD Mechanical Engineering, Indian Institute of Technology, Roorkee

Silvia Miu, PhD Mechanical Engineering, Politehnica University of Bucharest

RAS AL KHAIMAH WOMEN'S COLLEGE

Sanjeeva Witharana, PhD Nanothermal Engineering, University of Leeds



HEALTH SCIENCES DIVISION





Health Sciences Division

Divisional Mission

To offer nationally and internationally accredited programs to educate and train healthcare and human services work force in the UAE.

Senior Staff

Executive Dean: **Dr. Muhadditha Al Hashimi**

Associate Deans: **Dr. Mohammed Hag Ali, Loay Othman**

Degree	Offered at
Bachelor of Emergency Medical Services	Dubai Men's
Bachelor of Health Information Management	Khalifa City Women's, Sharjah Women's, Fujairah Women's
Bachelor of Medical Imaging Science.	Abu Dhabi Women's, Dubai Women's, Fujairah Women's
Bachelor of Medical Laboratory Science	Abu Dhabi Women's, Sharjah Women's
Bachelor of Nursing	Sharjah Women's, Fujairah Women's
Bachelor of Pharmacy	Dubai Women's
Bachelor of Social Work	Khalifa City Women's, Sharjah Women's
Bachelor of Veterinary Science	Al Ain Men's, Sharjah Men's, Sharjah Women's

Bachelor of Emergency Medical Services

(NQF Level 7)

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Department of Emergency Medical Services is committed to training the next generation of UAE nationals to the highest international standards of emergency medical care. With an emphasis on evidence based medicine, learning by doing and the latest educational technology, we strive to meet the needs of the community and our sponsors to have UAE nationals trained to provide emergency care to the critically ill or injured in the United Arab Emirates.

Program Description

The Bachelor of Emergency Medical Services program is a four-year post-Foundations program preparing graduates for emergency medical care professional practice. In the first two program years students develop an extensive knowledge of health sciences, communication, terminology and emergency medical care up to an intermediate life support level. The final two years of the program develop students' skills to advanced life support levels which include diagnostic, clinical judgment, research, quality and leadership. The program promotes the development of analytical thinking, problem-solving abilities, communication skills, professional ethics, social responsibility, professional citizenship, the ability to adapt to change and respond to challenges in the prehospital and in-hospital emergency settings, and a commitment to lifelong learning.

Students will have the option to graduate with a Diploma in Emergency Medical Services upon the successful completion of all Health Science common year courses and the Emergency Care modules and Preceptorships in the second year.

Program Learning Outcomes

Upon successful completion of the program, graduates will be able to:

1. Interpret and apply a wide range of detailed theoretical knowledge in order to formulate and implement an advanced level of treatment and alternative management modalities to provide safe, responsible and quality patient care in the emergency care setting.
2. Integrate clinical practice guidelines, evidence based medicine and theoretical principles to provide internationally aligned best practice within the emergency care setting.
3. Demonstrate a deep understanding of technological applications and medical innovation within the field of emergency medical care.
4. Demonstrate the psychomotor skills that are necessary to render emergency medical care to patients in accordance with the relevant advanced life support clinical practice guidelines (CPG).
5. Apply critical thinking skills to analyze medical emergencies and inform autonomous decision-making to deliver safe and effective emergency medical care.
6. Demonstrate the ability to integrate management and research skills with advancing technology in order to develop specialized clinical strategies for patients in the emergency care setting.
7. Work independently as well as part of a team in a diverse range of clinical and non-clinical emergency care settings.
8. Use lifelong learning as a reflective practitioner in order to modify practice and enhance the emergency medical care profession.
9. Demonstrate the professional attributes, conduct and leadership relevant to their role as advanced life support emergency care providers within the healthcare system and community.

Completion Requirements

Students must successfully complete a minimum of 138 credits as follows:	
Health Science Core Courses:	24 credits
Emergency Medical Services Core Courses:	54 credits
Emergency Medical Services Preceptorship Courses:	27 credits
General Studies:	33 credits

Course Credits

Health Science Core Courses**Required Credits: 24**

HSC 1023	Chemistry for Health Sciences	3
HSC 1033	Anatomy and Physiology	3
HSC 1113	Introduction to Healthcare Systems and Professional Practice	3
HSC 1123	Work Health and Safety	3
HSC 1803	Medical Terminology for Health Sciences	3
HSC 4003	Research Methods for Health Sciences	3
HSC 4006	Capstone Research Project for Health Sciences	6

Emergency Medical Services Core Courses**Required Credits: 54**

HEM 1103	EMT Basic	3
HEM 2014	Medical Emergencies	5
HEM 2024	Trauma Emergencies	4
HEM 2033	EMS Applied Pharmacology I	3
HEM 2103	Foundations of Professional Practice	3
HEM 2123	Obstetric, Gynecology, Neonatal and Pediatric Emergencies	3
HEM 3006	Advanced Prehospital Emergency Care I	6
HEM 3013	EMS Applied Pharmacology II	3
HEM 3106	Advanced Prehospital Emergency Care II	6
HEM 3113	Primary Health Care	3
HEM 4006	Advanced Obstetric, Gynecology and Pediatric Emergencies	6
HEM 4013	Leadership in Professional Practice	3
HEM 4106	Advanced Standards of Prehospital Emergency Care and Transport	6

Course Credits

Emergency Medical Services Preceptorship Courses**Required Credits: 27**

HEM 2903	Ambulance Preceptorship I	3
HEM 2913	Hospital Preceptorship I	3
HEM 2923	Ambulance Preceptorship II	3
HEM 3903	Ambulance Preceptorship III	3
HEM 3913	Hospital Preceptorship II	3
HEM 3923	Responder Preceptorship I	3
HEM 4903	Hospital Preceptorship III	3
HEM 4913	Responder Preceptorship II	3
HEM 4923	Responder Preceptorship III (IST Optional)	3

General Studies**Required Credits: 33**

English, Arabic or other Languages	15
Humanities or Art	3
Information Technology or Mathematics	3
The Natural Sciences	3
The Social or Behavioural Sciences	9

Diploma in Emergency Medical Services

(NQF Level 5)

Program Learning Outcomes

Upon successful completion of this program, graduates will be able to:

1. Apply knowledge, management and decision making aspects in order to provide safe, responsible and quality patient care in the emergency care setting.
2. Understand and integrate theoretical principles in order to use established clinical practice guidelines according to international standards within the field of emergency care.
3. Demonstrate the psychomotor skills that are necessary to render care to patients in accordance with the relevant clinical practice guidelines (CPG).
4. Apply specialist cognitive and practical skills in order to diagnose and treat a range of patients in a variety of emergency and non-emergency situations.
5. Demonstrate communication and information technology skills in order to coherently manage complex situations in the field of emergency care.
6. Coordinate or supervise routine and some non-routine emergency care of patients within a range of clinical and non-clinical settings at an intermediate life support level.
7. Participate in lifelong learning as a reflective practitioner in order to improve clinical practice and enhance the standards of emergency medical care.
8. Demonstrate the professional attributes, conduct and leadership relevant to their role as mid-level emergency care providers within the healthcare system and community.

Completion Requirements

Students must successfully complete a minimum of 69 credits as follows:	
Health Science Core Courses:	15 credits
Emergency Medical Services Core Courses:	18 credits
Emergency Medical Services Preceptorship Courses:	9 credits
General Studies:	24 credits

Recommended Sequence of Study

Bachelor of Emergency Medical Services (Total Credits = 138)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
(Year 1) Semester 1			(Year 1) Semester 2		
Required Credits: 15			Required Credits: 15		
HSC 1013	Human Biology	3	HSC 1033	Anatomy and Physiology	3
HSC 1803	Medical Terminology	3	HSC 1023	Chemistry for Health Sciences	3
HSC 1113	Intro to Healthcare Systems & Professional Practice	3	HSC 1123	Work Health & Safety	3
LSC 1103	Academic Reading & Writing I	3	LSM 1113	Statistical Mathematics	3
LSS 1003	Life and Study Skills	3	AES 1013	Arabic Communications I	3
(Year 1) Summer Semester			(Year 2) Semester 4		
Required Credits: 3			Required Credits: 15		
HEM 1103	EMT-Basic	3	HEM 2103	Foundations of Professional Practice	3
(Year 2) Semester 3			(Year 2) Semester 4		
Required Credits: 18			Required Credits: 15		
HEM 2014	Medical Emergencies	5	HEM 2123	Obstetric/gynecology/Neonatal/Paediatric Emergencies	3
HEM 2024	Trauma Emergencies	4	HEM 2913	Hospital Preceptorship I	3
HEM 2033	EMS Applied Pharmacology I	3	AES 1003	Emirati Studies	3
HEM 2903	Ambulance Preceptorship I	3	LSS 1123	Basic Methods of Scientific Research and Development	3
LSC 2183	English for Specific Purposes	3			
(Year 2) Summer Semester			(Year 3) Semester 6		
Required Credits: 3			Required Credits: 15		
HEM 2923	Ambulance Preceptorship II	3	HEM 3106	Advanced Prehospital Emergency Care II	6
Diploma Exit Option			(Year 3) Semester 5		
			Required Credits: 18		
HEM 3006	Advanced Prehospital Emergency Care I	6	HEM 3113	Primary Health Care	3
HEM 3013	EMS Applied Pharmacology II	3	HEM 3913	Hospital Preceptorship II	3
HEM 3903	Ambulance Preceptorship III	3	AES 3003	Professional Arabic	3
LSC 2103	Academic Reading and Writing II	3			
LSS 2403	Innovation and Entrepreneurship	3			
(Year 3) Summer Semester			(Year 4) Semester 8		
Required Credits: 3			Required Credits: 18		
HEM 3923	Responder Preceptorship I	3	HEM 4106	Advanced Standards of Prehospital Emergency Care and Transport	6
(Year 4) Semester 7			(Year 4) Semester 8		
Required Credits: 15			Required Credits: 18		
HEM 4006	Advanced Gynaecological/Obstetric & Paediatric Emergencies	6	HSC 4006	Capstone Research Project For HS	6
HEM 4903	Hospital Preceptorship III	3	HEM 4913	Responder Preceptorship II	3
HEM 4013	Leadership in Professional Practice	3	HEM 4923	Responder Preceptorship III (IST Optional)	3
HSC 4003	Research Methods for Health Sciences	3			

Academic Staff

Reon Conning, Bachelor in Emergency Medical Care & Rescue (MSc EMC enrolled)

Sunil Sookraj, Bachelor in Emergency Medical Care & Rescue (MSc EMC enrolled)

Faisal Binks, Bachelor in Emergency Medical Care & Rescue, Masters Business Administration (PhD enrolled)

Jacobus Naude, Bachelor in Emergency Medical Care & Rescue (MPhil EMC enrolled)

Bachelor of Health Information Management

(NQF Level 7)

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Health Information Management program is a nationally and internationally accredited program that educates and trains Health Information Management workforce in the UAE.

Program Description

The Bachelor of Health Information Management program prepares graduates for health information management professional practice. In the first three years of the program students develop extensive knowledge of health information coding and introductory management and health informatics studies. The final year of the program develops students' skills in health informatics, research, management, leadership and health data analysis.

The program promotes the development of analytical thinking, problem-solving abilities, communication skills, professional ethics, social responsibility, professional citizenship, the ability to adapt to change and respond to challenges in health information management, and a commitment to lifelong learning.

Students will have the option to graduate with a Higher Diploma in Health Information Coding upon the successful completion of all required courses and preceptorships after 3 years of study.

Program Learning Outcomes

change sentence to read: Upon successful completion of this program, graduates will be able to:

1. Apply management concepts, skills and decision making in order to manage accurate and timely health information.
2. Demonstrate basic knowledge of healthcare policy, economics and regulatory environments to include local, national and international health information management trends.
3. Apply appropriate classification system in evaluating and assigning diagnostic and procedural codes in a timely manner whilst maintaining the completeness and accuracy of data.
4. Manage healthcare data by applying applicable principles of health information technology and policies in compliance with Ministry of Health, local authorities and accreditation agency requirements.
5. Demonstrate the ability to work independently as well as part of a team in a diverse range of clinical and non-clinical settings to ensure safe management of health information practice.
6. Develop, and maintain professional competence and incorporate new solutions into health information management.
7. Demonstrate professional attributes relevant to their role and apply reflective practice in health information management

Completion Requirements

Students must successfully complete a minimum of 129 credits as follows:	
Health Science Core Courses:	24 credits
Health Information Management Core Courses:	60 credits
Health Information Management Preceptorship Courses:	12 credits
General Studies:	33 credits

Health Science Core Courses		
Required Credits: 24		
HSC 1023	Chemistry for Health Sciences	3
HSC 1033	Anatomy and Physiology	3
HSC 1113	Introduction to Healthcare Systems and Professional Practice	3
HSC 1123	Work Health and Safety	3
HSC 1803	Medical Terminology for Health Sciences	3
HSC 4003	Research Methods for Health Sciences	3
HSC 4006	Capstone Research Project for Health Sciences	6

Health Information Management Core Courses		
Required Credits: 60		
CIA 3103	Database Design and Administration	3
CIS 1303	Data and Information Management	3
HIM 1203	Health Information Coding I	3
HIM 2003	Health Information Coding II	3
HIM 2113	Applied Pathophysiology I	3
HIM 2203	Health Information Management Studies	3
HIM 2313	Applied Pathophysiology II	3
HIM 2323	Legal and Ethical Aspects in HIM	3
HIM 2403	Introduction to Management in Healthcare	3
HIM 3003	Biostatistics	3
HIM 3013	Health Information Coding III	3
HIM 3103	Health Informatics I	3
HIM 3113	Health Information Coding IV	3
HIM 3303	Epidemiology	3
HIM 4013	Quality Management in Healthcare	3
HIM 4023	Health Informatics II	3
HIM 4033	Finance Management in Healthcare	3
HIM 4103	Health Data Analysis	3
HIM 4303	Health Care Economics and Health Insurance	3
HIM 4413	Strategic Management in Health Care	3

1. Core courses: credits required & courses with their credit values = 78 credits

Health Information Management Preceptorship Courses		
Required Credits: 12		
HIM 2902	HIM Hospital Preceptorship I	2
HIM 3912	Coding Preceptorship I	2
HIM 3914	Coding Preceptorship II	4
HIM 4904	HIM Hospital Preceptorship II	4

General Studies		
Required Credits: 33		
English, Arabic or other Languages		15
Humanities or Art		3
Information Technology or Mathematics		3
The Natural Sciences		3
The Social or Behavioural Sciences		9

Higher Diploma in Health Information Coding (NQF Level 6)

Program Learning Outcomes

change sentence to read: Upon successful completion of this program, graduates will be able to:

1. Apply basic management concepts, skills and decision making in order to manage accurate and timely coded health information.
2. Demonstrate knowledge of healthcare policy and regulatory environments that pertains to health information coding systems requirements.
3. Apply appropriate classification system in evaluating and assigning diagnostic and procedural codes in a timely manner whilst maintaining the completeness and accuracy of data.
4. Manage healthcare data by applying principles of health information technology and policies in compliance with Ministry of Health, local authorities and accreditation agency requirements.
5. Demonstrate the ability to work independently as well as part of a team in a diverse range of clinical coding settings to ensure safe management of health information practice.
6. Develop, and maintain professional competence in health information coding.
7. Demonstrate professional attributes relevant to their role and apply reflective practice in health information coding

Completion Requirements

Students must successfully complete all Year 1, 2 and 3 courses with a minimum of 98 credits including:	
Health Sciences Core Courses:	15 credits
Health Information Coding Core Courses:	42 credits
Health Information Coding Preceptorship Courses:	8 credits
General Studies:	33 credits

Recommended Sequence of Study

Bachelor of Health Information Management (Total Credits = 129)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
(Year 1) Semester 1			(Year 1) Semester 2		
Required Credits: 15			Required Credits: 15		
HSC 1013	Human Biology	3	HSC 1033	Anatomy & Physiology	3
HSC 1803	Medical Terminology	3	HSC 1023	Chemistry for Health Sciences	3
HSC 1113	Intro to Healthcare Systems & Professional Practice	3	HSC 1123	Work Health & Safety	3
LSC 1103	Academic Reading & Writing I	3	LSM 1113	Statistical Mathematics	3
LSS 1003	Life and Study Skills	3	AES 1013	Arabic Communication I	3
(Year 1) Summer Semester*			(Year 2) Semester 4		
Required Credits:			Required Credits: 18		
(Year 2) Semester 3			(Year 3) Semester 6		
Required Credits: 17			Required Credits: 16		
HIM 1203	Health Information Coding I	3	HIM 2003	Health Information Coding II	3
HIM 2113	Applied Pathophysiology I	3	HIM 2313	Applied Pathophysiology II	3
HIM 2203	Health Information Management Studies	3	HIM 2323	Legal & Ethical Aspects in HIM	3
HIM 2902	HIM Hospital Preceptorship I	2	CIS 1303	Data & Information Management	3
LSC 2103	Academic Reading & Writing II	3	HIM 2403	Introduction Management in Healthcare	3
LSS 1123	Basic Methods of Scientific Research & Development	3	AES 1003	Emirati Studies	3
(Year 2) Summer Semester*			(Year 3) Semester 5		
Required Credits:			Required Credits: 17		
(Year 3) Summer Semester*			(Year 4) Semester 8		
Required Credits:			Required Credits: 15		
Higher Diploma in Health Information Coding Exit Option					
(Year 4) Semester 7			(Year 4) Semester 8		
Required Credits: 16			Required Credits: 15		
HIM 4023	Health Informatics II	3	HSC 4006	Capstone Research Project for Health Sciences	6
HIM 4013	Quality Management in Healthcare	3	HIM 4303	Healthcare Economics & Health Insurance	3
HIM 4033	Finance Management in Healthcare	3	HIM 4413	Strategic Management in Healthcare	3
HSC 4003	Research Methods for Health Sciences	3	HIM 4103	Health Data Analysis	3
HIM 4904	HIM Hospital Preceptorship II	4			

* Additional courses may be offered in each Summer Semester at the discretion of the Academic Division.

Academic Staff

Benjamin Poku, PH Public Health, Georgia Southern University, USA

Ina Kamaludin, Masters in Health Services Management, Curtin University of Technology

Lateef Olayanju, PhD Computing (Health Informatics), Coventry University

Loay Othman, MSc in eHealthcare, University of Queensland

Maryam Alhousani, Executive Master Healthcare Administration, Zayed University, Abu Dhabi

Marc Le Pape, PhD Communications & Information Science, University of Hawaii

Scott Weber, EdD Education, Boston University

Bachelor of Medical Imaging Science

(NQF Level 7)

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

To Prepare Emirati national students to practice competently and effectively as medical imaging professionals in diverse healthcare environments and meet the continuously thriving UAE stakeholder's demands for medical imaging human resources.

Program Description

The Bachelor of Medical Imaging Science (BMIS) program includes a knowledge base that examines specializations of general, emergency and specialized Medical Imaging best practices. This is in alignment with the industrial multi-modality medical imaging professional's characteristics. The BMIS program offers students in Year 4 an option to follow one of three tracks in MRI, advanced CT applications or clinical mammography. Each track consists of 9 credits where students select a specialized imaging modality. The track option will distinguish graduates from other competitor programs by equipping each BMIS graduate with a strong background to become ready for the high end specialized imaging job on the first day of employment.

The program provides a mix of education and training that equips graduates with the skills, knowledge and competencies to work within the UAE healthcare services system to effectively fulfil health care needs from the medical imaging perspective.

Program Description

The Higher Diploma in Medical Imaging Technology (HDMIT) program prepares students for professional, general and emergency medical imaging practice and includes a mix of theoretical knowledge, skills and competencies required for graduates to work in the clinical or non-clinical setting. The Higher Diploma in Medical Imaging Technology program includes a knowledge base that examines specializations of General, and emergency Medical Imaging best practice.

Both BMIS and HDMIT program credentials incorporate extensive supervised professional clinical placement in relevant healthcare settings.

Program Learning Outcomes

Upon successful completion of this program, graduates will be able to:

1. Apply advanced knowledge, management and decision-making aspects within the national and global medical imaging context to provide quality healthcare services in clinical and non-clinical settings.
2. Apply theoretical and operational medical imaging protocols to develop strategies that address challenges in undertaking general, emergency and specialized medical imaging procedures.
3. Provide competent and evidence-based patient care in general, emergency and specialized medical imaging procedures based on best international and ethical practices.
4. Evaluate diagnostic images produced to ensure diagnostic quality and to promote patient safety within the ALARA and best practice frameworks.
5. Work within a framework of evidence-based practice and continuing quality assurance, evaluate medical imaging systems, and undertake management solutions to ameliorate identified problems.
6. Demonstrate the ability to work independently as well as part of a team, in a diverse range of general, emergency and specialized medical imaging settings.
7. Develop and maintain professional competence and incorporate new solutions into general, emergency and specialized medical imaging practice.
8. Demonstrate professional attributes relevant to their role in the field of general, emergency and specialized medical imaging practice.

Completion Requirements

Students must successfully complete a minimum of 129 credits as follows:	
Health Science Core Courses:	27 credits
Medical Imaging Sciences Courses:	51 credits
Medical imaging Preceptorship Courses:	18 credits
General Studies:	33 credits

Health Science Core Courses		
Required Credits: 27		
HSC 1013	Human Biology	3
HSC 1023	Chemistry for Health Sciences	3
HSC 1033	Anatomy and Physiology	3
HSC 1113	Introduction to Healthcare Systems and Professional Practice	3
HSC 1123	Work Health and Safety	3
HSC 1803	Medical Terminology for Health Sciences	3
HSC 4003	Research Methods for Health Sciences	3
HSC 4006	Capstone Research Project for Health Sciences	6

Medical Imaging Sciences Courses		
Required Credits: 51		
HMI 2002	Medical Imaging Technology 1	3
HMI 2003	Patient care in medical imaging 1	3
HMI 2102	Medical Imaging Technology II	3
HMI 2303	Medical Imaging Positioning and Procedures 1	3
HMI 2403	Medical Imaging Anatomy and Pathology 1	3
HMI 2503	Medical Imaging Positioning and procedures II	3
HMI 2603	Medical Imaging Anatomy and Pathology II	3
HMI 3002	Medical Imaging Technology III	3
HMI 3003	Patient care in medical imaging II	3
HMI 3103	Medical Imaging Positioning and Procedures III	3
HMI 3113	Specialized Imaging I	3
HMI 3213	Radiation Safety and Biology	3
HMI 3223	Cross Sectional Anatomy	3
HMI 4003	Quality Management in medical imaging	3
HMI 4103	Specialized Imaging II	3
HMI 4113	Specialized Imaging III	3
HMI 4203	Professional Practice	3

Medical imaging Preceptorship Courses		
Required Credits: 18		
HMI 2613	Clinical Preceptorship I	3
HMI 3013	Clinical Preceptorship II	3
HMI 3233	Clinical Preceptorship III	3
HMI 4023	Clinical Preceptorship IV	3
HMI 4106	Clinical Preceptorship V	6

General Studies	
Required Credits: 33	
English, Arabic or other Languages	15
Humanities or Art	3
Information Technology or Mathematics	3
The Natural Sciences	3
The Social or Behavioural Sciences	9

Higher Diploma in Medical Imaging Technology (NQF Level 6)

Program Learning Outcomes

Students exiting with the Higher Diploma will be able to:

1. Apply relevant principles and theories to a national and global medical imaging context to provide quality healthcare services in clinical and non-clinical settings.
2. Apply theoretical and operational medical imaging protocols to address challenges in undertaking general and emergency medical imaging procedures.
3. Provide competent patient care in general and emergency medical imaging procedures based on best international and ethical practices.
4. Evaluate general and emergency diagnostic images produced to ensure diagnostic quality and to promote patient safety within the ALARA and best practice frameworks.
5. Work within a framework of evidence-based practice and continuing quality assurance, evaluate general and emergency medical imaging systems, and undertake solutions to ameliorate identified problems.
6. Demonstrate the ability to work independently as well as part of a team, in a diverse range of general and emergency medical imaging settings.
7. Develop and maintain professional competence and incorporate new solutions into general and emergency medical imaging practice.
8. Demonstrate professional attributes relevant to their role in the field of general and emergency medical imaging practice.

Completion Requirements

Students must successfully complete all Year 1, 2 and 3 courses with a minimum of 99 credits including:	
Health Science Core Courses:	18 credits
Medical Imaging Sciences Courses:	39 credits
Medical imaging Preceptorship Courses:	9 credits
General Studies:	33 credits

Higher diploma of Medical Imaging technology Completion Requirements

		Course Credits
Health Science Core Courses		
Required Credits: 18		
HSC 1013	Human Biology	3
HSC 1803	Medical Terminology for Health Sciences	3
HSC 1113	Introduction to Healthcare Systems and Professional Practice	3
HSC 1033	Anatomy and Physiology	3
HSC 1023	Chemistry for Health Sciences	3
HSC 1123	Work Health and Safety	3
Medical Imaging Sciences Courses		
Required Credits: 39		
HMI 2003	Patient care in medical imaging 1	3
HMI 2002	Medical Imaging Technology 1	3
HMI 2303	Medical Imaging Positioning and Procedures 1	3
HMI 2403	Medical Imaging Anatomy and Pathology 1	3
HMI 2102	Medical Imaging Technology II	3
HMI 2503	Medical Imaging Positioning and procedures II	3
HMI 2603	Medical Imaging Anatomy and Pathology II	3
HMI 3003	Patient care in medical imaging II	3
HMI 3002	Medical Imaging Technology III	3
HMI 3103	Medical Imaging Positioning and Procedures III	3
HMI 3113	Specialized Imaging I	3
HMI 3213	Radiation Safety and Biology	3
HMI 3223	Cross Sectional Anatomy	3
Medical imaging Preceptorship Course		
Required Credits: 9		
HMI 2613	Clinical Preceptorship I	3
HMI 3013	Clinical Preceptorship II	3
HMI 3233	Clinical Preceptorship III	3
General Studies		
Required Credits: 33		
English, Arabic or other Languages		15
Humanities or Art		3
Information Technology or Mathematics		3
The Natural Sciences		3
The Social or Behavioural Sciences		9

Recommended Sequence of Study

Bachelor of Medical Imaging Science

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
(Year 1) Semester 1			(Year 1) Semester 2		
Required Credits: 15			Required Credits: 15		
HSC 1013	Human Biology	3	HSC 1033	Anatomy and Physiology	3
HSC 1803	Medical Terminology	3	HSC 1023	Chemistry for Health Sciences	3
HSC 1113	Intro to Healthcare Systems & Professional Practice	3	HSC 1123	Work Health & Safety	3
LSC 1103	Academic Reading & Writing I	3	LSM 1113	Statistical Mathematics	3
LSS 1003	Life and Study Skills	3	AES 1013	Arabic Communication I	3
(Year 1) Summer Semester*			(Year 2) Semester 4		
(Year 2) Semester 3			Required Credits: 15		
Required Credits: 18			Required Credits: 15		
HMI 2003	Patient Care in Medical Imaging 1	3	HMI 2102	Medical Imaging Technology II	3
HMI 2002	Medical Imaging Technology 1	3	HMI 2503	Medical Imaging Positioning and Procedures II	3
HMI 2303	Medical Imaging Positioning and Procedures 1	3	HMI 2603	Medical Imaging Anatomy and Pathology II	3
HMI 2403	Medical Imaging Anatomy and Pathology 1	3	HMI 2613	Clinical Preceptorship I	3
LSC 2013	Academic Reading and Writing II	3	AES 1003	Emirati Studies	3
LSS 1123	Basic Methods of Scientific Research and Development	3	(Year 3) Semester 6		
(Year 2) Summer Semester*			Required Credits: 18		
(Year 3) Semester 5			Required Credits: 18		
Required Credits: 15			Required Credits: 18		
HMI 3003	Patient Care in Medical Imaging II	3	HMI 3113	Specialized Imaging I	3
HMI 3002	Medical Imaging Technology III	3	HMI 3213	Radiation Safety and Biology	3
HMI 3103	Medical Imaging Positioning and Procedures III	3	HMI 3223	Cross Sectional Anatomy	3
HMI 3013	Clinical Preceptorship II	3	HMI 3233	Clinical Preceptorship III	3
LSS 2403	Innovation and Entrepreneurship	3	AES 3003	Professional Arabic	3
(Year 3) Summer Semester*			LSC 2183	English for Specific Purposes	3
Higher Diploma in Medical Imaging Science Exit Option					
(Year 4) Semester 7			(Year 4) Semester 8		
Required Credits: 15			Required Credits: 15		
HMI 4003	Quality Management in medical imaging	3	HMI 4113	Specialized Imaging III	3
HMI 4013	Specialized Imaging II	3	HMI 4106	Clinical Preceptorship V	6
HMI 4023	Clinical Preceptorship IV	3	HSC 4006	Capstone Research Project For HS	6
HSC 4003	Research Methods for Health Sciences	3			
HMI 4203	Professional Practice	3			

* Additional courses may be offered in each Summer Semester at the discretion of the Academic Division.

Academic Staff

Hind Binjaffar, MSc Hospital Management. Hamdan Bin Mohammed Smart University, UAE.

Hussam Beituni, MSc Medical Imaging Interpretation, Charles Sturt University, Australia.

Majed Hiasat, MSc Radiation And Environmental Protection. Surrey University, UK.

Saleh Abuzeitoon, PhD Technical Vocational Education. Amman Arab University, Jordan.

Samar El-Farra MSc Computerised Tomography. Charles Strut University, Australia.

Bachelor of Medical Laboratory Science

(NQF Level 7)

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Bachelor of Medical Laboratory Science at the Higher Colleges of Technology aims to produce skilled Emirati professionals in medical laboratory sciences who are work ready as medical laboratory science professionals delivering diagnostic care to a wide variety of patients/clients

Program Description

The Bachelor of Medical Laboratory Science is a four-year professional program. Graduates are trained biomedical scientists who possess a broad range of knowledge in medical laboratory diagnostics with the ability to work proficiently and are culturally competent to deliver care to a wide range of clients/patients. The four years of undergraduate study integrates biomedical science theory, laboratory skills and supervised professional practice in a variety of clinical settings. Medical laboratory scientists are specialised in the area of clinical diagnostics, producing accurate results required by physicians and health care team members for treatment and management of patients and clients.

Graduates possess professional knowledge in the areas of haematology, immunology, transfusion science, clinical chemistry, microbiology, molecular and cellular pathology, with the potential to specialise and advance their skills in specialist areas. These skills can be easily transferred to work competently in public health labs, municipality and forensic labs and in the biotechnology industry.

Graduates who are successful in their programme can take the credentialing exam for the American Society of Clinical Pathologists International (M.T ASCPi), which provides access to society activities and programme recognition for those students who wish to advance their education into graduate studies.

Students will have the option to graduate with a Diploma in Medical Laboratory Technology (Laboratory Technician) upon the successful completion of all required courses and preceptorships after 2 years of study.

Program Learning Outcomes

Upon successful completion of this program the graduate will be able to:

1. Interpret and apply knowledge, management and decision making aspects to provide quality medical laboratory diagnostic services in variety of healthcare settings.
2. Demonstrate knowledge of healthcare regulations and integrate deep knowledge of relevant technological advances and evidence-based practice to address challenges in the field of laboratory medicine.
3. Demonstrate effective cognitive and technical skills to analyse clinical specimens, formulate solutions and identify risks in order to deliver laboratory decisions to support and enhance clinical care.
4. Demonstrate skills in using equipment and advanced technologies, information systems, and communication devices that support safe medical laboratory practice in a variety of healthcare settings.
5. Apply research skills to investigate problems in the medical laboratory discipline and to assess and evaluate quality procedures as relevant.
6. Demonstrate the ability to work independently as well as part of a team in a diverse range of clinical laboratories to ensure safe medical laboratory practice.
7. Develop, and maintain professional competence and incorporate new solutions into medical laboratory practice
8. Demonstrate professional attributes relevant to their role as medical laboratory technologists in the clinical laboratories

Completion Requirements

Students must successfully complete a minimum of 126 credits as follows:	
Health Science Core Courses:	24 credits
Medical Laboratory Sciences Core Courses:	54 credits
Medical Laboratory Sciences Preceptorship Courses:	15 credits
General Studies:	33 credits

Health Science Core Courses			Course Credits
Required Credits: 24			
HSC 1023	Chemistry for Health Sciences	3	
HSC 1033	Anatomy and Physiology	3	
HSC 1113	Introduction to Healthcare Systems and Professional Practice	3	
HSC 1123	Work Health and Safety	3	
HSC 1803	Medical Terminology for Health Sciences	3	
HSC 4003	Research Methods for Health Sciences	3	
HSC 4006	Capstone Research Project for Health Sciences	6	

Medical Laboratory Sciences Courses			Course Credits
Required Credits: 54			
HML 2043	Clinical Chemistry I	3	
HML 2013	Clinical Haematology I	3	
HML 2033	Medical Microbiology	3	
HML 2153	Histotechnology	3	
HML 2113	Systematic Bacteriology	3	
HML 2143	Clinical Hematology II	3	
HML 2053	Immunology	3	
HML 2203	Clinical Chemistry II	3	
HML 3023	Cytotechnology	3	
HML 3003	Hemostasis	3	
HML 3103	Applications in Molecular Diagnostics	3	
HML 3013	Parasitology, Virology, Mycology	3	
HML 3043	Transfusion Medicine	3	
HML 3033	Clinical Biochemistry	3	
HML 3053	Laboratory Management	3	
HML 4016	Clinical Correlations	6	
HML 4123	Pathology of Diseases	3	

Medical Laboratory Sciences Preceptorship Courses			Course Credits
Required Credits: 15			
HML 2213	Clinical Preceptorship I	3	
HML 4006	Clinical Preceptorship II	6	
HML 4116	Clinical Preceptorship III	6	

General Studies			Course Credits
Required Credits: 33			
English, Arabic or other Languages		15	
Humanities or Art		3	
Information Technology or Mathematics		3	
The Natural Sciences		3	
The Social or Behavioural Sciences		9	

Diploma in Medical Laboratory Technology

(NQF Level 5)

Program Learning Outcomes

Upon successful completion of this program, graduates will be able to:

1. Apply knowledge and decision making aspects to provide quality medical laboratory diagnostic services in a variety of healthcare settings.
2. Demonstrate knowledge of medical laboratory information assembly and retrieval, professional practice guidelines and underlying technological principles and concepts.
3. Demonstrate effective cognitive and technical skills to analyze clinical specimens and formulate solutions in order to deliver laboratory results to support and enhance clinical care.
4. Demonstrate skills in using equipment and technologies, information systems, and communication devices that support safe medical laboratory practice in a variety of healthcare settings.
5. Demonstrate the ability to work independently as a medical laboratory technician as well as part of a team in a range of clinical laboratories to ensure safe medical laboratory practice.
6. Develop, and maintain professional competence and incorporate new solutions into medical laboratory practice.
7. Demonstrate professional attributes relevant to their role as a medical laboratory technician in the clinical laboratories.

Completion Requirements

Students must successfully complete all Year 1 and 2 courses with a minimum of 66 credits including:	
Health Sciences Core:	15 credits
General Studies:	24 credits
Medical Laboratory Sciences Courses:	24 credits
Medical Laboratory Sciences Preceptorship Courses:	3 credits

Recommended Sequence of Study

Bachelor of Medical Laboratory Science (Total Credits = 126)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
(Year 1) Semester 1			(Year 1) Semester 2		
Required Credits: 15			Required Credits: 15		
HSC 1013	Human Biology	3	HSC 1033	Anatomy and Physiology	3
HSC 1803	Medical Terminology	3	HSC 1023	Chemistry for Health Sciences	3
HSC 1113	Intro to Healthcare Systems & Professional Practice	3	HSC 1123	Work Health & Safety	3
LSC 1103	Academic Reading & Writing I	3	LSM 1113	Statistical Mathematics	3
LSS 1003	Life and Study Skills	3	AES 1013	Arabic Communication I	3
(Year 1) Summer Semester*					
Required Credits:					
(Year 2) Semester 3			(Year 2) Semester 4		
Required Credits: 15			Required Credits: 18		
HML 2013	Clinical Hematology I	3	HML 2143	Clinical Hematology II	3
HML 2033	Medical Microbiology	3	HML 2113	Systematic Bacteriology	3
HML 2043	Clinical Chemistry I	3	HML 2203	Clinical Chemistry II	3
HML 2053	Immunology	3	HML 2153	Histotechnology	3
LSS 1123	Basic Methods of Scientific Research and Development	3	AES 1003	Emirati Studies	3
			LSC 2103	Academic Reading and Writing II	3
(Year 2) Summer Semester*					
Required Credits: 3					
HML 2213	Clinical Preceptorship I	3			

Diploma in Medical Laboratory Technology Exit (Credits = 66)

(Year 3) Semester 5			(Year 3) Semester 6		
Required Credits: 15			Required Credits: 15		
HML 3003	Hemostasis	3	HML 3043	Transfusion Medicine	3
HML 3013	Parasitology, Virology, Mycology	3	HML 3053	Laboratory Management	3
HML 3033	Clinical Biochemistry	3	HML 3103	Applications in Molecular Diagnostics	3
HML 3023	Cytotechnology	3	AES 3003	Professional Arabic	3
LSC 2183	English for Specific purposes	3	LSS 2403	Innovation and Entrepreneurship	3
(Year 3) Summer Semester*					
Required Credits:					
(Year 4) Semester 7			(Year 4) Semester 8		
Required Credits: 15			Required Credits: 15		
HSC 4003	Research Methods for Health Sciences	3	HML 4116	Clinical preceptorship III	6
HML 4016	Clinical Correlations	6	HSC 4006	Capstone Research Project For HS	6
HML 4006	Clinical preceptorship II	6	HML 4123	Pathology of Diseases	3

* Additional courses may be offered in each Summer Semester at the discretion of the Academic Division.

Academic Staff

Ahmed Sharah Eldin, PhD Experimental Medicine, Karolinska Institute.

Anjali Bantwal, Masters Pathology, Kuvempu University.

Ban Altoumah, Masters Clinical Biochemistry, University of Technology Sydney.

John Van Der Graaf, PhD Food Biochemistry, University of Reading.

Lama Muslamm, Masters Hematology and Blood Banking, Jordan University of Science and Technology.

Meytham Majeed, PhD Clinical/Medical Microbiology, Linköping University.

Muhammad Zaman, PhD Biochemistry, Brown University.

Nishi Singh, FRCPath, Royal College of Pathologists, UK.

Teresa Stuart, Masters Medical Laboratory Science, Charles Sturt University.

Zakeya Baalawy, PhD Pharmaceutical Sciences Research (Biochemistry), King's College, London.

Bachelor of Nursing

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Bachelor of Nursing program aims to equip UAE National graduates with the knowledge, skills and competencies that meet national and international nursing standards to deliver safe, quality care and optimize health for individuals, families and communities. Upon completion of the program UAE National graduates will be prepared to meet industry and professional expectations and will be offered employment.

Program Description

The Bachelor of Nursing degree program is a four-year, post-Foundations, 134-credit program that prepares the student for entry into professional practice as a generalist nurse. It includes a mix of theoretical knowledge in nursing, human and behavioral sciences, as well as other areas such as investigatory, managerial and communication knowledge and skills, all of which are required for competent, safe practice as a professional registered nurse. The program includes a knowledge base that examines the fields of: acute and chronic medical/surgical nursing; maternal and newborn health; child and adolescent health; care of the patient with complex and high dependency health needs; and community health. The program incorporates extensive supervised professional clinical education in selected and relevant clinical healthcare settings.

Program Learning Outcomes

- Apply nursing knowledge from the nursing, health, behavioral sciences, best practice and other relevant sources to provide quality healthcare services in clinical and non-clinical settings
- Utilize the nursing process framework to provide care for individuals, families, and communities in different settings to optimize health
- Demonstrate effective cognitive, technical, critical thinking and communication skills to establish, implement and evaluate nursing care plans within healthcare settings
- Utilize evidence-based practice research to improve patient outcomes to meet the changing healthcare needs of individuals, families and communities

- Demonstrate the ability to work independently and within a team in a diverse range of clinical healthcare and non-clinical settings
- Develop and sustain professional competencies to meet changing healthcare needs, professional standards of nursing practice and licensure requirements
- Demonstrate leadership and management skills to provide safe, quality care in a variety of healthcare settings
- Demonstrate professional moral, legal and ethical attributes relevant to their role as registered general nurses in their practice areas nationally and internationally

Completion Requirements

Students must successfully complete a minimum of 134 credits as follows:	
Health Science Core Courses:	21 credits
Nursing Core Courses:	52 credits
Nursing Practicum Courses:	28 credits
General Studies:	33 credits

Course Credits

Health Science Core Courses**Required Credits: 21**

HSC 1023	Chemistry for Health Sciences	3
HSC 1033	Anatomy and Physiology	3
HSC 1113	Introduction to Healthcare Systems and Professional Practice	3
HSC 1123	Work Health and Safety	3
HSC 1803	Medical Terminology for Health Sciences	3
HSC 4006	Capstone Research Project for Health Sciences	6

Nursing Core Courses**Required Credits: 52**

HNR 2003	Fundamentals of Nursing (Theory)	3
HNR 2014	History Taking and Physical Assessment	4
HNR 2022	Communication and Health Education Skills	2
HNR 2033	Pathophysiology	3
HNR 2102	Microbiology	2
HNR 2113	Clinical Pharmacology	3
HNR 2124	Adult Health Nursing I (Theory)	4
HNR 2143	Social and Behavioral Sciences for Nursing	3
HNR 3023	Adult Health Nursing II (Theory)	3
HNR 3043	Maternal Health Nursing and Care of the Newborn	3
HNR 3103	Mental Health Nursing (Theory)	3
HNR 3123	Child and Adolescent Health Nursing (Theory)	3
HNR 3142	Ethical and Legal Issues in Nursing	2
HNR 4003	Management of Individuals with Complex Health (Theory)	3
HNR 4013	Community Health Nursing (Theory)	3
HNR 4023	Evidence-Based Practice	3
HNR 4113	Leadership and Quality Management in Nursing	3
HNR 4122	Nursing Informatics	2

Course Credits

Nursing Practicum Courses**Required Credits: 28**

HNR 2013	Fundamentals of Nursing (Practice)	3
HNR 2154	Adult Health Nursing I (Practice)	4
HNR 3033	Adult Health Nursing II (Practice)	3
HNR 3052	Maternal Health Nursing and Care of the Newborn (Practice)	2
HNR 3112	Mental Health Nursing (Practice)	2
HNR 3133	Child and Adolescent Health Nursing (Practice)	3
HNR 4022	Community Health Nursing (Practice)	2
HNR 4033	Management of Individuals with Complex Health Needs (Practice)	3
HNR 4126	Consolidated Nursing Practice	6

Required Credits: 33**General Studies**

English, Arabic or other Languages	15
Humanities or Art	3
Information Technology or Mathematics	3
The Natural Sciences	3
The Social or Behavioural Sciences	9

Recommended Sequence of Study

Bachelor of Nursing

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
HSC 1013	Human Biology	3	HSC 1033	Anatomy and Physiology	3
HSC 1803	Medical Terminology	3	HSC 1023	Chemistry for Health Sciences	3
HSC 1113	Intro to Healthcare Systems & Professional Practice	3	HSC 1123	Work Health & Safety	3
LSC 1103	Academic Reading & Writing I	3	LSM 1113	Statistical Mathematics	3
LSS 1003	Life and Study Skills	3	AES 1013	Arabic Communication I	3
Year 1 Summer Semester*					
Required Credits:					
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 18			Required Credits: 16		
HNR 2003	Fundamentals of Nursing -Theory	3	HNR 2102	Microbiology	2
HNR 2013	Fundamentals of Nursing - Practice	3	HNR 2113	Clinical Pharmacology	3
HNR 2014	History Taking and Physical Assessment	4	HNR 2124	Adult Health Nursing I - Theory	4
HNR 2022	Communication and Health Education Skills	2	HNR 2154	Adult Health Nursing I - Practice	4
AES 1003	Emirati Studies	3	HNR 2143	Social and Behavioral Studies for Nursing	3
HNR 2033	Pathophysiology	3			
Year 2 Summer Semester*					
Required Credits: 3					
LSS 1123	Basic Research Methods	3			
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 17			Required Credits: 16		
HNR 3023	Adult Health Nursing II - Theory	3	HNR 3103	Mental Health Nursing - Theory	3
HNR 3033	Adult Health Nursing II - Practice	3	HNR 3112	Mental Health Nursing - Practice	2
HNR 3043	Maternal Health Nursing and Care of the Newborn – Theory	3	HNR 3123	Child and Adolescent Health Nursing -Theory	3
HNR 3052	Maternal Health Nursing and Care of the Newborn – Practice	2	HNR 3133	Child and Adolescent Health Nursing -Practice	3
LSC 2013	Academic Reading and Writing II	3	HNR 3142	Ethical and Legal Issues in Nursing	2
LSC 1503	Academic Spoken Communication	3	LSS 2403	Innovation and Entrepreneurship	3
Year 3 Summer Semester*					
Required Credits:					
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 17			Required Credits: 17		
HSC 4023	Evidence-Based Practice	3	HSC 4006	Capstone Research Project For HS	6
HNR 4003	Management of Individuals with Complex Health Needs – Theory	3	HNR 4113	Leadership and Quality Management in Nursing	3
HNR 4033	Management of Individuals with Complex Health Needs – Practice	3	HNR 4122	Nursing Informatics	2
HNR 4013	Community Health Nursing - Theory	3	HNR 4126	Consolidated Nursing Practice	6
HNR 4022	Community Health Nursing - Practice	2			
AES 3003	Professional Arabic	3			

* Additional courses may be offered in each Summer Semester at the discretion of the Academic Division.

Academic Staff

Catherine Alnajjar, Master of Nursing, University of Southern Queensland

Hania Dawani, Doctorate in Nursing Boston University, Master of Nursing in Public Health and Community Mental Health Nursing, Boston University

Jehad Adwan, PhD Nursing, University of Minnesota

Ligy Thandiackal, Master of Nursing, Topper of SJNAHS, College of Nursing

Mohammed Kasasbeh, PhD Nursing, Trinity College Dublin

Sarah Sanad, Clinical Nurse Specialist, Master of Science in Critical Care Nursing, University of Jordan

Bachelor of Pharmacy

(NQF Level 7)

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The mission of the **Bachelor of Pharmacy** program is to produce graduates, in response to the stakeholders' demand, who are work-ready to operate as Pharmacists in various areas of the technology driven pharmaceutical care, research, education and pharmaceutical industries.

Program Description

The Bachelor of Pharmacy program is a four-year, post-Foundations program preparing graduates as Pharmacists for professional practice in different areas of Pharmacy. Graduates are educated to provide quality pharmaceutical care with a patient centered focus.

The program stresses knowledge of the biological, chemical, pharmaceutical, clinical and social sciences that underpins pharmacy, an understanding of the relevance of that knowledge to patient care and pharmaceutical problem solving and the skills to apply that knowledge to specific pharmaceutical care circumstances. The program provides students with a firm foundation for lifelong learning by promoting the development of analytical thinking, problem-solving abilities, communication skills, technical skills, intellectual leadership potential and a commitment to professional ethics, social responsibility, professional citizenship and the ability to adapt to changes and respond to challenges in pharmaceutical healthcare delivery.

Graduates of this program will be competent to provide quality pharmaceutical care, current information and products in different areas of pharmacy with a patient centred focus.

Students will have the option to graduate with a Diploma in Pharmacy upon the successful completion of all required courses and preceptorships.

Program Learning Outcomes

On successful completion of this program, the graduates will be able to:

1. Apply knowledge, management and decision making aspects to provide quality pharmacy services to meet patients' drug related needs with the objective of achieving optimal patient outcomes and patient safety in clinical and non-clinical settings.
2. Demonstrate a broad and coherent body of knowledge of the major principles of physical-chemical, life, bio-medical, administrative and pharmaceutical sciences to successfully solve problems both in disciplinary and interdisciplinary areas of pharmacy.
3. Demonstrate effective cognitive and technical skills within the framework of evidence-based practice and continuing quality assurance to develop, implement and enhance processes and actions that ensure the safety, accuracy and high standards of pharmaceutical services and supplied products.
4. Demonstrate skills in using relevant advanced technologies, information systems, and communication devices that support quality professional practice routine as well as complex problems in a variety of pharmacy settings.
5. Demonstrate the ability to work independently or as part of a team and take responsibility in managing interactions with others in a diverse range of clinical and non-clinical settings.
6. Demonstrate professional attributes relevant to their role as pharmacist in their general as well as specialized field of practice.
7. Develop, and maintain professional competence and acquire new knowledge and skills with optimal incorporation of those into pharmacy practice.

Completion Requirements

Students must successfully complete a minimum of 136 credits as follows:	
Health Science Core Courses:	21 credits
Pharmacy Core Courses:	64 credits
Pharmacy Preceptorship Courses:	18 credits
General Studies:	33 credits

Course Credits

Health Science Core Courses**Required Credits: 21**

HSC 1023	Chemistry for Health Sciences	3
HSC 1033	Anatomy and Physiology	3
HSC 1113	Introduction to Healthcare Systems and Professional Practice	3
HSC 1803	Medical Terminology for Health Sciences	3
HSC 4003	Research Methods for Health Sciences	3
HSC 4006	Capstone Research Project for Health Sciences	6

Pharmacy Core Courses**Required Credits: 64**

HPH 1503	Introduction to Pharmacy	3
HPH 2003	Biological Organic Chemistry	3
HPH 2016	General Pharmacology	6
HPH 2023	Pharmaceutics I	3
HPH 2123	Microbiology and Immunology	3
HPH 2133	Pharmaceutics II	3
HPH 3054	Pharmaceutics III	4
HPH 3143	Pharmaceutical Analysis	3
HPH 2213	Systems Pharmacology	3
HPH 2153	Medicinal Chemistry I.	3
HPH 3006	Pathophysiology and Therapeutics I	6
HPH 3043	Medicinal Chemistry II	3
HPH 3163	Pathophysiology & Therapeutics II.	3
HPH 3133	Clinical Biochemistry & Toxicology	3
HPH 4073	Pathophysiology and Therapeutics III	3
HPH 4013	Complementary Medicine	3
HPH 4033	Pharmaceutical Care Practice Skills	3
HPH 4103	Pharmacy law, ethics and pharmacoconomics	3
HPH 4003	Biotechnology	3

Course Credits

Pharmacy Preceptorship Courses**Required Credits: 18**

HPH 2033	Community Pharmacy Preceptorship I	3
HPH 2143	Clinical Pharmacy Preceptorship I	3
HPH 3063	Community Pharmacy Preceptorship II	3
HPH 3153	Clinical Pharmacy Preceptorship II	3
HPH 4043	Industrial Pharmacy Preceptorship	3
HPH 4113	Advanced Pharmacy Practice	3

General Studies**Required Credits: 33**

English, Arabic or other Languages	15
Humanities or Art	3
Information Technology or Mathematics	3
Natural Sciences	3
Social or Behavioural Sciences	9

Diploma in Pharmacy

(NQF Level 5)

Program Learning Outcomes

Upon successful completion of this program, graduates will be able to:

1. Demonstrate a comprehensive knowledge of fundamental concepts of mathematics, bio-medical and pharmaceutical sciences including an understanding of the underlying theoretical and abstract concepts with significant depth in pharmacy and interdisciplinary areas.
2. Demonstrate knowledge and familiarity with brand and generic drug names, appearance, manufacturer, dosage forms(s), and route of administration for the most commonly used drugs.
3. Uphold legal and ethical standards to accurately implement international best pharmacy practice in interpreting prescriptions, preparing, labelling, packaging, processing and distributing medications while working under the supervision of a licensed pharmacist.
4. Demonstrate cognitive and psychomotor skills in using relevant advanced technologies, information systems, and communication devices in a variety of pharmacy practice settings.
5. Function, professionally, safely, and competently with little support as well as part of a team and take responsibility for developing appropriate approaches to managing complex work procedures and processes.
6. Demonstrate professional attributes while functioning in technical and non-technical contexts and take responsibility to develop the performance of their own and others.
7. Demonstrate responsibility for planning own life-long learning in order to improve competencies while actively observing ethical professional standards.

Recommended Sequence of Study

Bachelor of Pharmacy (Credits = 136)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
(Year 1) Semester 1			(Year 1) Semester 2		
Required Credits: 15			Required Credits: 15		
HSC 1803	Medical Terminology	3	HSC 1033	Anatomy and Physiology	3
HSC 1113	Intro to Healthcare Systems & Professional Practice	3	HSC 1023	Chemistry for Health Sciences	3
HSC 1013	Human Biology	3	HPH 1503	Introduction to Pharmacy	3
LSC 1103	Academic Reading & Writing I	3	LSM 1113	Statistical Mathematics	3
LSS 1003	Life and Study Skills	3	AES 1013	Arabic Communication I	3
(Year 1) Summer Semester*			(Year 2) Semester 4		
Required Credits:			Required Credits: 19		
(Year 2) Semester 3			(Year 2) Semester 4		
Required Credits: 19			Required Credits: 19		
HPH 2003	Biological Organic Chemistry	3	HPH 2113	Systems Pharmacology	3
HPH 2016	General Pharmacology	6	HPH 2153	Medicinal Chemistry I.	3
HPH 2023	Pharmaceutics I	3	HPH 2123	Microbiology and Immunology	3
HPH 2024	Community Pharmacy Preceptorship (Block)	4	HPH 2133	Pharmaceutics II	3
LSC 2103	Academic Reading & Writing II	3	HPH 2144	Clinical Pharmacy Preceptorship I (Block)	4
(Year 2) Summer Semester*			AES 1003 Emirati Studies 3		
Required Credits:					

Diploma in Pharmacy Exit Option (Credits = 68)

(Year 3) Semester 5			(Year 3) Semester 6		
Required Credits: 18			Required Credits: 15		
HPH 3003	Pathophysiology and Therapeutics I	3	HPH 3163	Pathophysiology & Therapeutics II	3
HPH 3043	Medicinal Chemistry II	3	HPH 3133	Clinical Biochemistry & Toxicology	3
HPH 3053	Pharmaceutics III	3	HPH 3143	Pharmaceutical Analysis	3
HPH 3063	Community Pharmacy Preceptorship II	3	HPH 3153	Clinical Pharmacy Preceptorship II	3
LSS 1123	Basic Methods of Scientific Research and Development	3	LSS 2403	Innovation and Entrepreneurship	3
LSC 2183	English for Specific Purposes	3	(Year 4) Semester 8		
(Year 3) Summer Semester*			Required Credits: 16		
Required Credits:					
(Year 4) Semester 7			(Year 4) Semester 8		
Required Credits: 17			Required Credits: 16		
HPH 4073	Pathophysiology and Therapeutics III	3	HPH 4003	Biotechnology	3
HPH 4013	Complementary Medicine	3	HSC 4006	Capstone Research Project For HS	6
HPH 4033	Pharmaceutical Care Practice Skills	3	HPH 4103	Pharmacy law, ethics and pharmacoeconomics	3
HSC 4003	Research Methods for Health Sciences programs	3	HPH 4114	Advanced Pharmacy Practice (Block)	4
HPH 4042	Industrial Pharmacy Preceptorship (Block)	2			
AES 3003	Professional Arabic	3			

* Additional courses may be offered in each Summer Semester at the discretion of the Academic Division.

Academic Staff

Amged Mustafa, Faculty, PhD Pharmacology, Uppsala University, Sweden

Lamia AlHajri, Faculty, Pharm.D. United Arab Emirates University, UAE

Mariola Mackowiak, Faculty, MN Athabasca University, Alberta, Canada

Nishi Singh, Campus Chair, Faculty, FRCPath, Royal College of Pathologists, UK.

Sima Jabbari, Faculty, Pharm.D. Purdue University, USA

Steven Zay, Curriculum Lead, Faculty, PhD Chemistry, Hungarian Academy of Sciences; PhD Pharmaceutical Sciences, Semmelweis University, Budapest, Hungary.

Bachelor of Social Work

(NQF Level 7)

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Bachelor of Social Work program prepares Emirati nationals for professional social work employment to meet stakeholder needs in the UAE. The program provides a mix of education and training that equips graduates with the skills, knowledge and competencies to work effectively with UAE individuals, families, groups and communities to effectively address problems and improve social functioning.

Program Description

Successful completion of the four-year, social work program will provide graduates with the knowledge, skills and competencies to work with individuals, families, groups and communities to solve problems and enhance social functioning.

Graduates will be able to work in a variety of health and human service settings, and apply varied intervention methods to address problems such as child abuse, old age, disabilities, family and child relationships, family violence, mental illness and crisis management.

Students will have the option to graduate with a Diploma in Child Protection upon the successful completion of all required courses and preceptorships. Successful completion of the two-year Child Protection Diploma will provide graduates with the knowledge, skills and competencies to work with children at risk for abuse and neglect.

Program Learning Outcomes

Upon successful completion of the program, graduates of the Program will be able to:

1. Apply the principles, theoretical and technical knowledge and management and leadership concepts from social work and related fields to provide quality health and human services in clinical and non-clinical settings.
2. Demonstrate effective generalist social work practice through the ability to critically assess and systematically apply the professional knowledge, practice methods and ethical and legal standards of practice.
3. Evaluate and apply research and knowledge from multiple fields to support social work practice that promotes social justice in the local and global context.
4. Evaluate and apply problem solving and technical skills for social work practice with individuals, families, groups and communities.

5. Create and implement and approaches and techniques for social work practice across complex systems at all levels of culturally appropriate practice from the individual to the community.
6. Develop approaches to managing and supervising complex practice within local and global contexts respecting socio-cultural norms and relationships.
7. Demonstrate the ability to maintain autonomy within supervisory contexts taking responsibility for managing team relationships and mentoring others in social work practice.
8. Demonstrate the ability to self-evaluate and exhibit responsibility for contributing to and managing professional development and ethical standards of practice within complex and unfamiliar settings.

Completion Requirements

Students must successfully complete a minimum of 122 credits as follows:	
Social Work Core Courses:	72 credits
Social Work & Child Protection Preceptorship Courses	14 credits
Health Sciences Core Courses	3 credits
General Studies:	33 credits

Course Credits

Health Science Core Courses**Required Credits: 3**

HSC 2203	Introduction to Psychology	3
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Social Work Core Courses**Required Credits: 72**

HSW 1003	Introduction to Social Work	3
HSW 1023	Basic Counselling Techniques	3
HSW 1033	Social Diversity and Justice	3
HSW 1223	Social Work Practice I	3
HSW 1233	Social Work and Child Protection in the UAE	3
HSW 1313	Human Behaviour in the Social Environment I	3
HSW 2013	Vulnerable Populations: Children and Family	3
HSW 2033	Law and Ethics in Social Work	3
HSW 2133	Social Work with Families	3
HSW 2143	Social Work Practice II	3
HSW 2323	Vulnerable Populations: Persons with Disabilities	3
HSW 3013	Social Work Practice III	3
HSW 3023	Human Behaviour in the Social Environment II	3
HSW 3103	Social Work with Groups	3
HSW 3033	Advanced Groupwork	3
HSW 3223	Social Work Action and Advocacy	3
HSW 4033	Social Policy and Development	3
HSW 4233	International Social Work	3
HSW 4223	Social Work Administration	3
HSW 4243	Psychological Health and Issues	3
HSW 4303	Social Work with Communities	3
HSW 4013	Research Methodologies for Social Work	3
HSW 4216	Capstone Research Project	6

Core courses: credits required & courses with their credit values = 72 credits

Course Credits

Social Work and Child Protection Preceptorship Courses**Required Credits: 14**

HSW 2324	Child Protection Field Education	4
HSW 3943	Social Work Field Education II	3
HSW 4927	Social Work Field Education III	7

General Studies**Required Credits: 33**

English, Arabic or other Languages	15
Information Technology or Mathematics	3
The Natural Sciences	3
Emirati Studies	3
The Social or Behavioural Sciences	9

Diploma in Child Protection

(NQF Level 5)

Program Learning Outcome

Upon successful completion of the program, graduates will be able to:

1. Apply specialized knowledge to provide quality social services in clinical and non-clinical child protection settings.
2. Demonstrate effective relationships with children and families through integration of social work theory with ethical and legal standards of practice.
3. Assess and apply knowledge and methods for effective practices in child protection that promotes social justice in the local context.
4. Plan and implement child welfare interventions to promote the positive development of children and families.
5. Develop and maintain professional relationships through the application of culturally appropriate communication skills, problem solving methods and ethical standards
6. Coordinate the implementation of child protection processes, helping to guide teams in designing practices that support the development of healthy socio-cultural relationships.
7. Under Guidance, demonstrate the ability to work both independently as well as part of a team to develop the performance of self and others within a diverse range of settings.
8. Demonstrate development as a child protection worker responsible for comprehending and applying ethical standards.

Recommended Sequence of Study

Bachelor Social Work

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
(Year 1) Semester 1			(Year 1) Semester 2		
Required Credits: 15			Required Credits: 15		
HSW 1003	Introduction to Social Work	3	HSW 1223	Social Work Practice I: Assessment and Documentation	3
HSW 1023	Basic Counseling Techniques	3	HSW 1233	Social Work and Child Protection in the UAE	3
HSW 1033	Diversity and Social Justice	3	HSW 1313	Human Behavior in the Social Environment I	3
LSC 1103	Academic Reading and Writing I	3	HSC 1233	Human Growth and Development	3
LSS 1003	Life and Study Skills	3	AES 1013	Arabic Communication I	3
(Year 1) Summer Semester*			(Year 2) Semester 4		
Required Credits:			Required Credits: 16		
(Year 2) Semester 3			(Year 2) Summer Semester*		
Required Credits: 15			Required Credits:		
HSW 2013	Vulnerable Populations: Children and Families	3	HSW 2143	Social Work Practice II: Advanced Communication and Counseling	3
HSW 2033	Law and Ethics in Social Work	3	HSW 2323	Vulnerable Populations II: Persons with Disabilities	3
HSW 2133	Social Work with Families	3	HSW 2324	Child Protection Preceptorship	4
HSC 2203	Introduction to Psychology	3	LSM 1113	Statistical Math	3
LSC 2103	Academic Reading and Writing II	3	AES 1003	Emirate Studies	3
(Year 2) Summer Semester*			(Year 3) Semester 6		
Required Credits:			Required Credits: 15		
Diploma in Child Protection Exit Option			(Year 3) Semester 5		
Required Credits: 15			Required Credits: 15		
HSW 3013	Social Work Practice III: Interventions and Case management	3	HSW 3033	Advanced Group-work	3
HSW 3023	Human Behavior in the Social Environment II	3	HSW 3223	Social Work Action and Advocacy	3
HSW 3103	Social Work with Groups	3	HSW 3943	Social Work Preceptorship II	3
LSC 2183	English for Specific Purposes	3	LSS 2403	Innovation and Entrepreneurship	3
AES 3003	Professional Arabic	3	LSS 1123	Basic Methods of Scientific Research and Development	3
(Year 3) Summer Semester*			(Year 4) Semester 8		
Required Credits: 6			Required Credits: 16		
(Year 4) Semester 7			Required Credits: 16		
Required Credits: 15			Required Credits: 16		
HSW 4013	Research Methodologies for Social Work	3	HSW 4216	Capstone Research for Social Work	6
HSW 4033	Social Policy and Social Development	3	HSW 4303	Social Work and Communities	3
HSW 4233	International Social Work	3	HSW 4927	Social Work Preceptorship III	7
HSW 4223	Social Work Administration	3			
HSW 4243	Psychological Health and Issues	3			

* Additional courses may be offered in each Summer Semester at the discretion of the academic division

Academic Staff

Beverly Wagner, Masters in Social Work, University of South Carolina, USA

Hassan Elshazali, Masters in Social Work, University of Toronto, Canada

John Roberts, Master of Social Work, Exeter University, UK

Nawal Majeed, Masters of Science in Education and Training, Surrey University, UK

Dr. Vasintha Veeran, PhD Social Work, University of Natal, Durban (UND), South Africa

Vinod Kozhissery, Masters in Arts in Medical and Psychiatric Social Work, University of Madras, India

Bachelor of Veterinary Science

Admission to program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The Bachelor of Veterinary Science program produces national veterinary bioscientists who have expertise in the following areas: animal and food biosecurity, public health, livestock production and health, and veterinary laboratory support services, as prioritized by Federal and Local UAE Authorities.

Program Description

The Bachelor of Veterinary Science program aims to produce Emirati national graduates to work as veterinary bioscientists to fulfill the need identified by the UAE government. The 4-year program provides graduates with expertise in the following areas: animal and food biosecurity, public health, livestock production and health, and veterinary laboratory support services, prioritized by federal and local UAE Authorities. This program allows full articulation of the existing Associate Degree in Veterinary Science.

Students will have the option to graduate with a Higher Diploma in Veterinary Laboratory Technology upon the successful completion of all required courses and preceptorships after 3 years of study.

Program Learning Outcomes

Upon successful completion of this program, graduates will be able to:

1. Demonstrate knowledge and policies and regulatory environments applicable to veterinary diagnostic laboratories, meat inspection, food safety, livestock health and production, and animal quarantine.
2. Apply knowledge regarding animal disease detection, management, prevention and surveillance, to enhance the quality of livestock production, and animal and food

biosecurity.

3. Demonstrate effective cognitive and technical skills needed to advance animal and food biosecurity, public health, livestock health and production, and veterinary laboratory support services.
4. Demonstrate skills in using equipment, applying technologies and information systems that support and enhance animal and food biosecurity, public health, livestock health and production, and veterinary laboratory support services.
5. Demonstrate the ability to work independently and as part of a team in a diverse range of animal related, food safety related and laboratory based settings.
6. Demonstrate ability for life-long learning aimed to enhance skills as veterinary bioscientists.
7. Demonstrate professional attributes relevant to their roles as a veterinary bioscientists in animal and food biosecurity, public health, livestock health and production, and veterinary laboratory support services or pursuit of other career opportunities in the UAE.

Completion Requirements

Students must successfully complete a minimum of 132 credits as follows:	
Veterinary Science Core Courses:	78 credits
Veterinary Science Practicum Courses:	21 credits
General Studies:	33 credits

Course Credits

Veterinary Science Core Courses**Required Credits: 78**

VET 1103	Veterinary Anatomy and Physiology I	3
VET 1123	General Chemistry	3
VET 1203	Veterinary Anatomy and Physiology II	3
VET 1223	Animal Science and Husbandry	3
VET 1313	Physics for VET Sciences	3
VET 1403	Veterinary Terminology	3
VET 1413	Inorganic Chemistry	3
VET 2003	Veterinary Pathology	3
VET 2123	Animal Nutrition and Feeding	3
VET 2133	Systemic Pathology	3
VET 2213	Organic Chemistry	3
VET 2323	Biochemistry	3
VET 2423	Veterinary Microbiology	3
VET 3003	Veterinary Parasitology	3
VET 3033	Principles of Genetics and Animal Reproduction	3
VET 3103	Meat Inspection and Food Safety	3
VET 3113	Animal and Disease Prevention I	3
VET 3143	Veterinary Professional Practice	3
VET 3423	Clinical Pathology and Diagnostic Laboratory Tests	3
VET 4003	Pharmacology and Toxicology for Veterinary Science	3
VET 4033	Animal Disease and Prevention II	3
VET 4113	Infectious Diseases and Animal Quarantine	3
VET 4123	Veterinary Epidemiology and Public Health	3
VET 4133	Wildlife and Aquaculture	3
VET 4223	Veterinary Legislations and Animal Welfare	3
HSC 4003	Research Methods for Health Sciences	3

Course Credits

Veterinary Science Practicum Courses**Required Credits: 22**

VET 1904	Veterinary Practicum I	4
VET 2904	Veterinary Practicum II	4
VET 3904	Veterinary Practicum III	4
VET 4904	Veterinary Practicum IV	4
VET 4906	Veterinary specialised area Capstone Project	6

General Studies**Required Credits: 33**

English, Arabic or other Languages	15
Humanities or Art	6
Information Technology or Mathematics	3
The Natural Sciences	3
The Social or Behavioural Sciences	6

<i>Total Required Credits</i>	<i>130</i>
<i>Maximum Duration of Study</i>	<i>6 years</i>
<i>Cost Recovery Program</i>	<i>Yes</i>
<i>Minimum Duration of Study</i>	<i>4 Years</i>
<i>Program Code</i>	<i>VETAB</i>
<i>Major Code</i>	

Higher Diploma in Veterinary Laboratory Technology

Program Learning Outcomes

Students exiting with the Higher Diploma will be able to:

1. Apply knowledge, critical thinking and problem solving skills in animal health sector.
2. Practice skills learned to assist veterinary medical teams in public and private veterinary health services.
3. Demonstrate the ability to work as part of a team in a diverse range of animal related, food safety related and laboratory based settings.
4. Apply skills in using equipment, technologies and information systems that support veterinary laboratory diagnostic services.
5. Demonstrate professional attributes relevant to their roles as veterinary technologists in veterinary laboratory support services or pursuit of other career opportunities.

Completion Requirements

Students must successfully complete all Year 1, 2 and 3 courses with a minimum of 99 credits including:	
Veterinary Core Courses:	54 credits
Veterinary Practicum Courses:	12 credits
General Studies:	33 credits

Recommended Sequence of Study

Bachelor of Veterinary Science

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
(Year 1) Semester 1			(Year 1) Semester 2		
Required Credits: 15			Required Credits: 15		
LSC 1103	Academic Reading and Writing I	3	AES 1013	Arabic I	3
LSSS 1003	Life Study Skills	3	VET 1203	Anatomy & Physiology II (incl. Histology)	3
VET 1103	Anatomy & Physiology I	3	VET 1223	Animal Science and Husbandry	3
VET 1123	General Chemistry	3	VET 1313	Physics for VET Sciences	3
VET 1403	Veterinary Terminology	3	VET 1413	Inorganic Chemistry	3
(Year 1) Summer Semester*					
Required Credits: 4					
VET 1904	Veterinary Preceptorship I	4			
(Year 2) Semester 3			(Year 2) Semester 4		
Required Credits: 15			Required Credits: 19		
LSS 1123	Basic Methods of Scientific Research and Development	3	AES 1003	Emirati Studies	3
LSC 2103	Academic Reading and Writing II	3	LSM 1113	Statistical Math	3
VET 2003	Veterinary Pathology	3	VET 2323	Biochemistry	3
VET 2123	Animal Nutrition & Feeding	3	VET 2423	Veterinary Microbiology	3
VET 2213	Organic Chemistry	3	VET 2133	Systemic Pathology	3
(Year 2) Summer Semester*			VET 2904	Veterinary Preceptorship II	4
Required Credits:					
(Year 3) Semester 5			(Year 3) Semester 6		
Required Credits: 15			Required Credits: 12		
LSS 2403	Innovation and Entrepreneurship	3	LSC 2183	English for Specific Purposes	3
AES 3003	Professional Arabic	3	VET 3103	Meat Inspection and Food Safety	3
VET 3003	Veterinary Parasitology	3	VET 3113	Animal Disease and Prevention I	3
VET 3033	Principles of Genetics and Animal Reproduction	3	VET 3143	Veterinary Professional Practice	3
VET 3423	Clinical Pathology and Diagnostic Laboratory Tests	3			
(Year 3) Summer Semester*					
Required Credits: 4					
VET 3904	Veterinary Preceptorship III	4			

Higher Diploma in Veterinary Laboratory Technology exit option

(Year 4) Semester 7			(Year 4) Semester 8		
Required Credits: 16			Required Credits: 15		
HSC 4003	Research Methods for Health Sciences	3	VET 4223	Veterinary Legislations & Animal Welfare	3
VET 4003	Pharmacology & Toxicology for Veterinary Science	3	VET 4123	Veterinary Epidemiology & Public Health	3
VET 4113	Infectious Diseases and Animal Quarantine	3	VET 4133	Wildlife and Aquaculture	3
VET 4033	Animal Disease and Prevention II	3	VET 4906	Veterinary specialized area Capstone Project	6
VET 4904	Veterinary Practicum IV	4			

* Additional courses may be offered in each Summer Semester at the discretion of the academic division

Academic Staff

Dr. Claudia Sofia Antunes Ferreira, PhD Microbiology University of Lisbon

Dr. Muhammad Asif Raza, Post –Doctorate Animal Science, Universidad Autonoma de Yucatan, PhD Animal Science, University of Kensel,

Dr. Rabiha Seboussi, Post-Doctorate: Department of Animal Science, Laval University, PhD, SUPAGRO. Montpellier

Dr. Sudhakar Bhandare, PhD Animal Science, University of Nottingham

MILITARY AND SECURITY
DIVISION





Military and Security Division

Divisional Mission

The Military and Security Division has a mission to provide the UAE Security Services of the Police and Armed Forces with exceptional graduates to become Officers and Leaders of character to meet the needs of the UAE Government now and in the future. The Division aims to produce graduates with a broad range of personal and professional competencies to prepare them to take their positions as leading and responsible citizens of the nation as well as specialist professionals within the UAE Security Services.

The Division aims to work in a delivery partnership with the UAE Police Force and UAE Defence Force to provide education for the future Officers of the Police and UAE Defence Force. The Division aims to provide programs that are a balanced blend of academic study and applied science and vocational practice. Graduates are able to use the education and applied competency practice to carry out their professional duties protecting the community and the nation.

Senior Staff

Executive Dean: **Dr. Hashim Al Zaabi**

Associate Dean (Aviation Science): **Dr. Stephen Rayner**

Associate Dean (Naval Science): **Dr Mahmood Rahi**

Program Chair (Police): **Dr. Ayman Mousa**

List of degrees offered

- Bachelor of Aviation Science
- Bachelor of Aviation Support
- Bachelor of Naval Science
- Diploma in Naval Science
- Diploma in Criminal Justice
- Diploma in Law Enforcement
- Diploma in Border Security Operation
- Diploma in Auditing and Discipline Policing

Khalifa Bin Zayed Air College

Bachelor of Aviation Science

Admission to program

This program is only open to Officer Cadets already employed by the UAE Armed Forces. Selection to the program is conducted annually by a committee nominated by the General Head Quarters of the Armed Forces (GHQ) in consultation with HCT. The entry requirements for the Bachelor of Aviation Science are jointly determined by the UAE Armed Forces and HCT to meet the requirements of the UAE Armed Forces as an employer and the standards for higher education as set by the CAA. Students wishing to take this program should apply to the UAE Armed Forces to enter employment with the UAE Armed Forces in the first instance.

Program Mission

Prepare future Officers as exceptional leaders of the UAE Armed Forces providing them with a sound understanding of military sciences, aero-sciences and flight in order for them to become professional military pilots on the international defence stage with a vision for the future, and an ethos of loyalty, obedience and dedication to the national duty.

Program Description

The Bachelor of Aviation Science Program prepares students for employment as an Officer in Military Aviation employed in a general or specialist Pilot position in the UAE Armed Forces.

The program provides training for general employment as an Officer or specific employment as a specialist through one of three concentrations:

- Fixed Wing Pilot
- Helicopter Pilot
- UAV Pilot

Program Learning Outcomes

In addition to the generic graduate outcomes related to the Bachelor graduates of the Higher Colleges of Technology, cadets, upon completion of the modified program, will be able to:

- PLO 1: Function in multidisciplinary teams and develop military leadership capabilities to support and conduct tactical military pilot operations.
- PLO 2: Communicate effectively and concisely military pilot ideas, directions and communications in written, oral and visual form.
- PLO 3: Identify, formulate, and solve scientific and operational problems encountered in the practice of

performing the role of a military pilot.

- PLO 4: Identify the latest military technology and supporting environmental and societal concepts to assist all aspects of military pilot operations.
- PLO 5: Interpret military orders and utilise supporting aviation data, principles and military technology to plan and execute military pilot operations.
- PLO6: Operate a range of military aviation equipment in the training environment.
- Area of Concentration PLOs:
- PLO 7 Fixed Wing Pilot: Pilot a fixed wing training aircraft on a range of Fixed Wing Military Training Missions.
- PLO 8 Helicopter Pilot: Pilot a rotary wing training aircraft on a range of Helicopter Military Training Missions.
- PLO 9 UAV Pilot: Pilot a UAV training aircraft and operate UAV Sensor Systems on a range of UAV Military Training Missions.

Completion Requirements

Students must successfully complete a minimum of 124 credits, including:	
Military Studies:	9 credits
Aviation Core:	55 credits
Aviation Electives:	27 credits
General Studies:	33 credits

Fixed Wing Pilot Concentration

Required courses: AVS 3133, AFT 4006, AFT 4015, AFT 4025, AFT 4101, AFT 4112, AFT 4202, AFT 4212, AFT 4221 from the Aviation Science Electives.

Helicopter Pilot Concentration

Required courses: AVS 3163, AVS 4003, HFT 4002, HFT 4013, HFT 4022, HFT 4103, HFT 4113, HFT 4122, HFT 4203, HFT 4212, HFT 4221 from the Aviation Science Electives

UAV Pilot Concentration

Required courses: AVS 3133, UAV 4003, UAV 4012, UAV 4022, UAV 4031, UAV 4041, UAV 4103, UAV 4113, UAV 4203, UAV 4213, UAV 4223 from the Aviation Science Electives

		Course Credits
Military Studies		
Required credits: 9		
MTS 1002	Leadership	2
MTS 1102	Staff Duties	2
MTS 1112	Topography	2
MTS 2103	Aircraft Weapons Systems	3
Aviation Core		
Required credits: 55		
AVS 1003	Aviation IT Systems	3
AVS 1013	Aviation Electric & Magnetic Fundamentals	3
AVS 1023	Aviation Calculus	3
AVS 2113	Meteorology I	3
AVS 2123	Principles of Flight	3
AVS 2133	Survival	3
AVS 2143	Aircraft Systems and Components	3
AVS 3003	Avionics	3
AVS 3013	Instruments	3
AVS 3023	Aero Engines	3
AVS 3033	Navigation	3
AVS 3042	Meteorology II	2
AVS 3103	Airmanship	3
AVS 3113	Aviation Safety	3
AVS 3123	Advanced Navigation	3
AVS 3143	Human Factors	3
AVS 4012	Aviation Physiology	2
AVS 4126	Project	6
General Studies		
Required credits: 33		
AES 1003	Emirati Studies	3
AES 1013	Arabic Communications I	3
AHM 1203	Aviation Physics	3
LSC 1103	Academic Reading & Writing I	3
LSC 1503	Academic Spoken Communication	3
LSC 2183	English For Special Purposes	3
LSC 2213	English For Leadership	3
LSM 1103	Technical Mathematics	3
LSS 1003	Life & Study Skills	3
LSS 1123	Basic Methods of Scientific Research & Development	3
LSS 2403	Innovation and Entrepreneurship	3

		Course Credits
Aviation Electives		
Required credits: 27		
AVS 3133	Aircraft Performance : Aeroplane	3
AVS 3163	Principles of Flight Helicopter	3
AVS 4003	Aircraft Performance : Helicopter	3
AFT 4006	Aeroplane Ground School Training	6
AFT 4015	Aeroplane General Handling Ground School	5
AFT 4025	Aeroplane General Handling Flying	5
AFT 4101	Aeroplane Instrument Flying Ground School	1
AFT 4112	Aeroplane Instrument Flying	2
AFT 4202	Aeroplane Navigation Flying Phase	2
AFT 4212	Aeroplane Formation Flying Phase	2
AFT 4221	Aeroplane Night Flying Phase	1
HFT 4002	Helicopter General Handling Ground School 1	2
HFT 4013	Helicopter General Handling Ground School 2	3
HFT 4022	Helicopter General Handling Basic	2
HFT 4103	Helicopter General Handling Advanced	3
HFT 4113	Helicopter Instrument Flying Ground School	3
HFT 4122	Helicopter Instrument Flying	2
HFT 4203	Helicopter Navigation	3
HFT 4212	Helicopter Night Flying	2
HFT 4221	Helicopter Mission Flying	1
UAV 4003	UAV Pilot Ground School	3
UAV 4012	UAV Pilot General Handling Ground School	2
UAV 4022	UAV Pilot General Handling Flying	2
UAV 4031	UAV Pilot Instrument Flying	1
UAV 4041	UAV Pilot Navigation Flying	1
UAV 4103	Unmanned Aircraft Operations	3
UAV 4113	Unmanned Vehicle Systems	3
UAV 4203	UAV Ground School	3
UAV 4213	Flight Simulation Training	3
UAV 4223	Flight Training	3
AVS 2153	Radar Systems	3
ADF 3103	Air and Space Power	3
ADF 4134	Aircraft Recognition	4
ADF 4112	Airspace Management	2

Recommended Sequence of Study

Bachelor of Aviation Science

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1 (all)			Year 1 Semester 3 (all)		
Required Credits: 8			Required Credits: 15		
AES 1013	Arabic Communications I	3	LSC 1103	Academic Reading & Writing I	3
MTS 1002	Leadership	2	LSC 1503	Academic Spoken Communication	3
LSS 1003	Life & Study Skills	3	LSH 2403	Innovation and Entrepreneurship	3
<hr/>			<hr/>		
Year 1 Semester 2 (all)			Year 2 Semester 6		
Required Credits: 7			Required Credits: 18		
AES 1003	Emirati Studies	3	AVS 3003	Avionics	3
MTS 1102	Staff Duties	2	AVS 3013	Instruments	3
MTS 1112	Topography	2	AVS 3113	Aviation Safety	3
<hr/>			<hr/>		
Year 2 Semester 4			Year 3 Semester 7		
Required Credits: 21			Required Credits:		
LSC 2183	English For Special Purposes	3	LSS 1123	Basic Methods of Scientific Research & Development	3
AHM 1203	Aviation Physics	3	AVS 4012	Aviation Physiology	2
AVS 1023	Aviation Calculus	3		Aviation Elective	
AVS 2143	Aircraft Systems and Components	3		Aviation Elective	
AVS 2113	Meteorology I	3		Aviation Elective	
AVS 2123	Principles of Flight	3			
AVS 2133	Survival	3			
<hr/>			<hr/>		
Year 2 Semester 5			Year 3 Semester 8		
Required Credits: 20			Required Credits:		
LSC 2213	English For Leadership	3	AVS 4126	Project	
MTS 2103	Aircraft Weapons Systems	3		Aviation Elective	
AVS 1013	Aviation Electric & Magnetic Fundamentals	3		Aviation Elective	
AVS 3023	Aero Engines	3		Aviation Elective	
AVS 3103	Airmanship	3			
AVS 3033	Navigation	3			
AVS 3042	Meteorology II	2			
<hr/>			<hr/>		
Year 3 Semester 9			Year 3 Semester 9		
Required Credits:			Required Credits:		
			AVS 4126	Project	3
				Aviation Elective	
				Aviation Elective	
				Aviation Elective	

Fixed Wing Pilot Concentration

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 2 Semester 4			Year 2 Semester 6		
Required Credits: 21			Required Credits: 18		
LSC 2183	English For Special Purposes	3	AVS 3003	Avionics	3
AHM 1203	Aviation Physics	3	AVS 3013	Instruments	3
AVS 1023	Aviation Calculus	3	AVS 3113	Aviation Safety	3
AVS 2143	Aircraft Systems and Components	3	AVS 3123	Advanced Navigation	3
AVS 2113	Meteorology I	3	AVS 3133	Aircraft Performance : Aeroplane (Elective)	3
AVS 2123	Principles of Flight	3	AVS 3143	Human Factors	3
AVS 2133	Survival	3			
Year 2 Semester 5					
Required Credits: 20					
LSC 2213	English For Leadership	3			
MTS 2103	Aircraft Weapons Systems	3			
AVS 1013	Aviation Electric & Magnetic Fundamentals	3			
AVS 3023	Aero Engines	3			
AVS 3103	Airmanship	3			
AVS 3033	Navigation	3			
AVS 3042	Meteorology II	2			
Year 3 Semester 7			Year 3 Semester 9		
Required Credits: 16			Required Credits: 8		
LSS 1123	Basic Methods of Scientific Research & Development	3	AVS 4126	Project	3
AVS 4012	Aviation Physiology	2	AFT 4202	Aeroplane Navigation Flying Phase (Elective)	2
AFT 4006	Aeroplane Ground School Training (Elective)	6	AFT 4212	Aeroplane Formation Flying Phase (Elective)	2
AFT 4015	Aeroplane General Handling Ground School (Elective)	5	AFT 4221	Aeroplane Night Flying Phase (Elective)	1
Year 3 Semester 8					
Required Credits: 11					
AVS 4126	Project	3			
AFT 4025	Aeroplane General Handling Flying (Elective)	5			
AFT 4101	Aeroplane Instrument Flying Ground School (Elective)	1			
AFT 4112	Aeroplane Instrument Flying (Elective)	2			

Helicopter Pilot Concentration

Course Code	Course Title	Course Credits
Year 2 Semester 4		
Required Credits: 21		
LSC 2183	English For Special Purposes	3
AHM 1203	Aviation Physics	3
AVS 2143	Aircraft Systems and Components	3
AVS 1023	Aviation Calculus	3
AVS 2113	Meteorology I	3
AVS 2123	Principles of Flight	3
AVS 2133	Survival	3

Year 2 Semester 5		
Required Credits: 20		
LSC 2213	English For Leadership	3
MTS 2103	Aircraft Weapons Systems	3
AVS 1013	Aviation Electric & Magnetic Fundamentals	3
AVS 3023	Aero Engines	3
AVS 3103	Airmanship	3
AVS 3033	Navigation	3
AVS 3042	Meteorology II	2

Year 3 Semester 7		
Required Credits: 15		
LSS 1123	Basic Methods of Scientific Research & Development	3
AVS 4003	Aircraft Performance : Helicopter (Elective)	3
AVS 4012	Aviation Physiology	2
HFT 4002	Helicopter General Handling Ground School 1 (Elective)	2
HFT 4013	Helicopter General Handling Ground School 2 (Elective)	3
HFT 4022	Helicopter General Handling Basic (Elective)	2

Year 3 Semester 8		
Required Credits: 11		
AVS 4126	Project	3
HFT 4103	Helicopter General Handling Advanced (Elective)	3
HFT 4113	Helicopter Instrument Flying Ground School (Elective)	3
HFT 4122	Helicopter Instrument Flying (Elective)	2

Course Code	Course Title	Course Credits
Year 2 Semester 6		
Required Credits: 18		
AVS 3003	Avionics	3
AVS 3013	Instruments	3
AVS 3113	Aviation Safety	3
AVS 3123	Advanced Navigation	3
AVS 3163	Principles of Flight Helicopter (Elective)	3
AVS 3143	Human Factors	3

Year 3 Semester 9		
Required Credits: 9		
AVS 4126	Project	3
HFT 4203	Helicopter Navigation (Elective)	3
HFT 4212	Helicopter Night Flying (Elective)	2
HFT 4221	Helicopter Mission Flying (Elective)	1

UAV Pilot Concentration

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 2 Semester 4			Year 2 Semester 6		
Required Credits: 21			Required Credits: 18		
LSC 2183	English For Special Purposes	3	AVS 3003	Avionics	3
AHM 1203	Aviation Physics	3	AVS 3013	Instruments	3
AVS 2143	Aircraft Systems and Components	3	AVS 3113	Aviation Safety	3
AVS 1023	Aviation Calculus	3	AVS 3123	Advanced Navigation	3
AVS 2113	Meteorology I	3	AVS 3133	Aircraft Performance : Aeroplane (Elective)	3
AVS 2123	Principles of Flight	3	AVS 3143	Human Factors	3
AVS 2133	Survival	3			
Year 2 Semester 5			Year 3 Semester 7		
Required Credits: 20			Required Credits: 10		
LSC 2213	English For Leadership	3	LSS 1123	Basic Methods of Scientific Research & Development	3
MTS 2103	Aircraft Weapons Systems	3	AVS 4012	Aviation Physiology (Elective)	2
AVS 1013	Aviation Electric & Magnetic Fundamentals	3	UAV 4003	UAV Pilot Ground School	3
AVS 3023	Aero Engines	3	UAV 4012	UAV Pilot General Handling Ground School	2
AVS 3103	Airmanship	3			
AVS 3033	Navigation	3			
AVS 3042	Meteorology II	2			
Year 3 Semester 8 (UAV Pilots)			Year 3 Semester 9		
Required Credits: 13			Required Credits: 12		
AVS 4126	Project	3	AVS 4126	Project	3
UAV 4022	UAV Pilot General Handling Flying (Elective)	2	UAV 4203	UAV Ground School (Elective)	3
UAV 4031	UAV Pilot Instrument Flying (Elective)	1	UAV 4213	Flight Simulation Training (Elective)	3
UAV 4041	UAV Pilot Navigation Flying (Elective)	1	UAV 4223	Flight Training (Elective)	3
UAV 4103	Unmanned Aircraft Operation (Elective)	3			
UAV 4113	Unmanned Vehicle Systems (Elective)	3			

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Williams Delphino, Masters, TESOL, The University of San Francisco via School of Education

Khalifa Bin Zayed Air College

Bachelor of Aviation Support

Admission to program

This program is only open to Officer Cadets already employed by the UAE Armed Forces. Selection to the program is conducted annually by a committee nominated by the General Head Quarters of the Armed Forces (GHQ) in consultation with HCT. The entry requirements for the Bachelor of Aviation Support is jointly determined by the UAE Armed Forces and HCT to meet the requirements of the UAE Armed Forces as an employer and the standards for higher education as set by the CAA. Students wishing to take this program should apply to the UAE Armed Forces to enter employment with the UAE Armed Forces in the first instance.

Program Mission

Prepare future Officers as exceptional leaders of the UAE Armed Forces providing them with a sound understanding of military sciences, aero-sciences, flight and aviation operations in order for them to become professional officers supporting aviation operations on the international defence stage with a vision for the future, and an ethos of loyalty, obedience and dedication to the national duty.

Program Description

The Bachelor of Aviation Support Program prepares students for employment as an Officer in Military Aviation employed in a general or specialist support position in the UAE Armed Forces.

The program provides training for general employment as an Officer in an Aviations Support or specialist Air Defence position. There is one Area of Concentration for the Bachelor of Aviation Support:

- **Air Defence Officer.**

Program Learning Outcomes

In addition to the generic graduate outcomes related to the Bachelor graduates of the Higher Colleges of Technology, cadets, upon completion of the modified program, will be able to:

- PLO 1: Function in multidisciplinary teams and develop military leadership capabilities to support and conduct tactical military operations.
- PLO 2: Communicate effectively and concisely military ideas, directions and communications in written, oral and visual form.
- PLO 3: Identify, formulate, and solve scientific and operational problems encountered in the practice of performing the role of a military aviation officer.
- PLO 4: Identify the latest military technology and supporting environmental and societal concepts to assist all aspects of military aviation operations.
- PLO 5: Interpret military orders and utilise supporting aviation data, principles and military technology to plan and execute military aviation operations.
- PLO 6: Operate a range of airborne and ground based military aviation equipment in the training environment.
- Area of Concentration PLOs:
- PLO 7 Air Defence: Plan and prepare to use Air Defence techniques and technologies on a range of aviation military training missions.

Completion Requirements

Students must successfully complete a minimum of 121 credits, including:	
Military Studies:	12 credits
Aviation Support Core:	51 credits
Aviation Support Electives:	25 credits
General Studies:	33 credits

Air Defence Officer Concentration

Required courses: AVS 2123, ADF 3003, ADF 3013, ADF 4003, ADF 4013, ADF 4123, ADF 4207 from the Aviation Science Electives

		Course Credits
Military Studies		
Required credits: 12		
MTS 1002	Leadership	2
MTS 1102	Staff Duties	2
MTS 1112	Topography	2
MTS 1123	Air Force History & Organisation	3
MTS 2103	Aircraft Weapons Systems	3
Aviation Support Core		
Required credits: 51		
AVS 1003	Aviation IT Systems	3
AVS 1013	Aviation Electric & Magnetic Fundamentals	3
AVS 1023	Aviation Calculus	3
AVS 2113	Meteorology I	3
AVS 2133	Survival	3
AVS 2153	Radar Systems	3
AVS 3033	Navigation	3
AVS 3083	Electrical Systems	3
AVS 3193	Aviation Law	3
AVS 3143	Human Factors	3
AVS 3153	Electronic Warfare Systems	3
AVS 3173	Missile Systems	3
ADF 3103	Air and Space Power	3
ADF 4112	Airspace Management	2
ADF 4134	Aircraft Recognition	4
AVS 4126	Project	6

		Course Credits
Aviation Support Electives		
Required credits: 25		
AVS 2123	Principles of Flight	3
ADF 3003	Air Defence Systems	3
ADF 3013	Air Defence Tactics	3
ADF 4003	Tactical Communications Systems	3
ADF 4013	Land Forces Organisation & Weapons	3
ADF 4123	Fighter Control	3
ADF 4207	Ground Based Air Defence Systems Operation	7
General Studies		
Required credits: 33		
AES 1003	Emirati Studies	3
AES 1013	Arabic Communications I	3
AHM 1203	Aviation Physics	3
LSC 1103	Academic Reading & Writing I	3
LSC 1503	Academic Spoken Communication	3
LSC 2183	English For Special Purposes	3
LSC 2213	English For Leadership	3
LSM 1103	Technical Mathematics	3
LSS 1003	Life & Study Skills	3
LSS 1123	Basic Methods of Scientific Research & Development	3
LSS 2403	Innovation and Entrepreneurship	3

Recommended Sequence of Study

Bachelor of Aviation Support

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1 (all)			Year 1 Semester 3 (all)		
Required Credits: 8			Required Credits: 18		
AES 1013	Arabic Communications I	3	LSC 1103	Academic Reading & Writing I	3
MTS 1002	Leadership	2	LSC 1503	Academic Spoken Communication	3
LSS 1003	Life & Study Skills	3	LSH 2403	Innovation and Entrepreneurship	3
			LSM 1103	Technical Mathematics	3
			AVS 1003	Aviation IT Systems	3
			MTS 1123	Air Force History & Organisation	3
Year 1 Semester 2 (all)					
Required Credits: 7					
AES 1003	Emirati Studies	3			
MTS 1102	Staff Duties	2			
MTS 1112	Topography	2			
Year 2 Semester 4			Year 2 Semester 6		
Required Credits: 18			Required Credits: 15		
LSC 2183	English For Special Purposes	3	AVS 3083	Electrical Systems	3
AHM 1203	Aviation Physics	3	AVS 3193	Aviation Law	3
MTS 2103	Aircraft Weapons Systems	3	AVS 3153	Electronic Warfare Systems	3
AVS 2113	Meteorology I	3	AVS 3173	Missile Systems	3
AVS 1023	Aviation Calculus	3	ADF 3103	Air & Space Power	3
AVS 2133	Survival	3			
Year 2 Semester 5					
Required Credits: 19					
LSC 2213	English For Leadership	3			
AVS 1013	Aviation Electric & Magnetic Fundamentals	3			
AVS 2153	Radar Systems	3			
AVS 3033	Navigation	3			
AVS 3143	Human Factors	3			
ADF 4134	Aircraft Recognition	4			

Air Defence Officer Concentration

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 3 Semester 7			Year 3 Semester 9		
Required Credits: 12			Required Credits: 10		
LSS 1123	Basic Methods of Scientific Research & Development	3	AVS 4126	Project	3
AVS 2123	Principles of Flight (Elective)	3	ADF 4207	Ground Based Air Defence Systems Operations (Elective)	7
ADF 4003	Tactical Communications Systems (Elective)	3			
ADF 4013	Land Forces Organisation & Weapons (Elective)	3			
Year 3 Semester 8					
Required Credits: 14					
ADF 4112	Airspace Management	2			
ADF 3003	Air Defence Systems (Elective)	3			
ADF 3013	Air Defence Tactics (Elective)	3			
ADF 4123	Fighter Control (Elective)	3			
AVS 4126	Project	3			

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Williams Delphino, Masters, TESOL, The University of San Francisco via School of Education

Rashid Bin Saeed Al Maktoum Naval College

Bachelor in Naval Science

Admission to program

Admission to the program is conducted annually by a committee nominated by the General Head Quarters of the UAE Armed Forces (GHQ) in consultation with HCT. The number of cadets admitted to the Naval College is determined by the general policy of GHQ.

Program Mission

The program provides graduates with the scientific/ technological knowledge, communication and leadership skills required for the exploitation of the increasingly complex technologies involved in modern naval operations. The planned integration of curriculum is aimed at producing graduates with the necessary scientific, technical, communication and cognitive skills which will enable them to function effectively as naval officers, whilst ensuring that the HCT Graduate Outcomes for graduates of the Higher Colleges of Technology are met. The program will produce graduates capable of working as effective executive officers in the UAE Navy.

Program Description

The program has been designed to provide concurrent academic and military studies. When cadets are at the Naval College, the emphasis of their training will be on academic and professional studies to develop their intellectual capabilities, professional knowledge and vocational utility. The other important emphasis will be on military education and training to develop the qualities of character and leadership that are appropriate to officers in the UAE Naval Forces.

The program includes academic courses with naval relevance and focus, which are integrated with the professional courses and targeted specifically at the future executive officers of the UAE Navy. It provides cadets with the best possible combination of military knowledge, naval science, leadership and management skills and practical professional training.

To provide a broad base of academic skills and intellectual capacity, the program includes a general foundation of management, physics, mathematics, information technology, scientific and technical courses, in addition to fundamental courses in English language and effective communication.

These courses develop the naval students' ability to reflect on their personal performance and capability as professional naval officers. They will, in addition, develop awareness of

their nation and the world around them. Key communication skills, together with appropriate cognitive skills such as critical thinking and quantitative reasoning, will also be developed during the program.

To complete the cadets' development, the program provides a sequence of professional courses in naval sciences selected to equip them with the knowledge required to assume a leadership position in the UAE Naval Forces. The midshipmen training program works in conjunction with the professional naval courses to provide students with a diverse learning experience.

Students have the option to exit the program with a Diploma in Naval Science degree after completion of Semester 4 (see Completion Requirements below).

Program Goals

The aim of the program is to produce naval leaders of character and vision. Officers will ascribe to the College core values of integrity first, service before self, and excellence in all that they do. To that end, the curriculum is designed to ensure that each graduate enters the UAE Navy with the unique combination of education and professional skills required by a naval officer.

In addition to the generic graduate outcomes related to graduates of the Higher Colleges of Technology, naval students, upon completion of the program, will be able to:

- Demonstrate a knowledge base in marine science, navigation and technology, suitable for a career as a marine professional
- Employ the necessary seamanship, communication and navigation skills to safely operate military vessels
- Show appropriate officer-like qualities of discipline, leadership, management and physical fitness
- Deploy a range of scientific, technical, communication and transferable skills which will enhance their effectiveness in their chosen career
- Manage and reflect on their own work, lifelong-learning and professional development

Program Learning Outcomes

Bachelor of Naval Science graduates will be able to:

- Exhibit situation appreciation, analytical and leadership qualities. Display effective attitude and beliefs to perform the role of military commanders.
- Demonstrate the ability to make sensible operational decisions based on sound knowledge of naval equipment, machinery, weapons and sensors.
- Take decisions under various Naval Warfare and Operations to ensure safety of naval platforms.
- Demonstrate complete understanding of handling naval platforms Damage Control and NBCD states.
- Confidently exhibit navigation, communications, and operational skills in multi-platform, multi-threat naval scenarios.
- Demonstrate sound knowledge of Rules of Road, and Rules of Engagements at sea.

Completion Requirements

Students seeking the Bachelor of Naval Science degree must successfully complete a minimum of 132 credits, including:	
Naval Science and Engineering Core Courses	24 credits
Naval Professional Core Courses (Diploma Level)	31 credits
Midshipman Sea Training Courses	15 credits
Naval Professional Core Courses (Bachelor Level)	29 credits
General Studies	33 credits

Course Credits

Naval Science and Engineering Core Courses

Required Credits: 24

NSE 1003	Fluid Mechanics for Naval Applications	3
NSE 2003	Ship Electrical Technology	3
NSE 2013	Principles of Naval Sensors	3
NSE 2023	Maritime Environment and Law of the Sea	3
NSE 1013	Ship Structure and Damage Control I	3
NSE 2033	Ship Structure and Damage Control II	3
NSE 2043	Ship Propulsion I	3
NSE 2103	Ship Propulsion II	3

Naval Professional Core Courses Diploma Level

Required Credits: 31

NPS 2103	Naval Leadership and Management	3
NPS 2004	Seamanship I	4
NPS 2113	Seamanship II	3
NAV 1104	Navigation I	4
NAV 2004	Navigation II	4
NAV 2104	Navigation III	4
NWR 1103	Naval Warfare and Operations I	3
NWR 2103	Naval Warfare and Operations II	3
NPS 2013	Naval Communications	3

Course Credits

Midshipman Sea Training Courses

Required Credits: 15

NPS 3003	Midshipman Sea Time - Seamanship	3
NPS 3013	Midshipman Sea Time - Navigation	3
NPS 3023	Midshipman Sea Time - Naval Engineering	3
NPS 3033	Midshipman Sea Time - Naval Operations & Communications	3
NPS 3043	Midshipman Sea Time - Fleet Work Simulator	3

Naval Professional Core Courses - Bachelor Level

Required Credits: 29

NAV 4003	Navigation Team Training	3
NPS 4003	Bridge & Ship Systems	3
NAV 4014	Ocean Navigation	4
NAV 4023	Coastal Navigation	3
NAV 4033	Restricted Waters Navigation	3
NWR 4013	Bridge Warfare I	3
NWR 4003	Bridge Warfare II	3
NPS 4124	Communications & Intelligence	4
NPS 4133	Capstone Project	3

General Studies

Required Credits: 33

LSC 1103	Academic Reading and Writing I	3
LSC 2103	Academic Reading and Writing II	3
LSC 1503	Academic Spoken Communications	3
LSC 2183	English for Specific Purposes	3
AES 1013	Arabic Communications I	3
LSS 1003	Life and Study Skills	3
AES 1003	Emirati Studies	3
PHY 1103	Physics I	3
LSM 1103	Technical Mathematics	3
LSS 2403	Innovation & Entrepreneurship	3
LSS 1123	Basic Methods of Scientific Research and Development	3

Diploma in Naval Science Exit Option

Program Learning Outcomes

Diploma graduates will be able to:

- Demonstrate traits of sound discipline, leadership, decision making, intellectual curiosity, ability to communicate effectively, work in teams, and the knowledge and determination to uphold the values of UAE.
- Demonstrate sound knowledge of General Studies and Naval Science subjects as applied in Naval environments.
- Apply basic Navigation skills to ensure safe passage at sea. Recognise the navigational aids, their operation, and understand the maritime operating environments.
- Recognize seamanship gear and its operation in conduct of operations including anchor and cable work, rope work, boat work, berthing, replenishment, and search and rescue missions.
- Demonstrate a basic knowledge of naval warfare, operations and tactics including, general operations, above water warfare, underwater warfare and air warfare.

Completion Requirement

Students opting to exit the programme with a Diploma in Naval Science must successfully complete a minimum of 88 credits, including:	
Naval Science and Engineering Core Courses	24 credits
Naval Professional Core Courses (Diploma Level)	31 credits
General Studies Courses	33 credits

Recommended Sequence of Study

Bachelor in Naval Science

Year 1: Semesters I and II					
Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Semester I: Nov-Mar (16 weeks)			Semester II: Apr-Sep (20 weeks)		
Required Credits: 15			Required Credits: 22		
AES 1013	Arabic Communications I	3	AES 1003	Emirati Studies	3
LSC 1503	Academic Spoken Communication	3	NWR 1103	Naval Warfare and Operations I	3
LSM 1103	Technical Mathematics	3	NAV 1104	Navigation I	4
LSS 1003	Life and Study Skills	3	NSE 1003	Fluid Mechanics for Naval Applications	3
PHY 1103	Physics I	3	NSE 2003	Ship Electrical Technology	3
			NSE 1013	Ship Structure and Damage Control I	3
			LSC 1103	Academic Reading and Writing I	3

Year 2: Semester III and IV					
Semester III: Oct-Mar (20 weeks)			Semester IV: Apr-Sept (20 weeks)		
Required Credits: 26			Required Credits: 25		
NPS 2004	Seamanship I	4	NPS 2113	Seamanship II	3
LSC 2183	English for Specific Purposes	3	LSC 2103	Academic Reading and Writing II	3
LSS 2403	Innovation and Entrepreneurship	3	LSS 1123	Basic Methods of Scientific Research and Development	3
NPS 2013	Naval Communications	3	NPS 2103	Naval Leadership and Management	3
NAV 2004	Navigation II	4	NWR 2103	Naval Warfare and Operations II	3
NSE 2013	Principles of Naval Sensors	3	NAV 2104	Navigation III	4
NSE 2033	Ship Structure and Damage Control II	3	NSE 2023	Maritime Environment and Law of the Sea	3
NSE 2043	Ship Propulsion I	3	NSE 2103	Ship Propulsion II	3

Diploma in Naval Science Exit Option

At Sea Year 3: Semester V		
Semester V (Oct - March) - Midshipman Training		
Required Credits: 15		
NPS 3003	Midshipman Sea Time - Seamanship	3
NPS 3013	Midshipman Sea Time - Navigation	3
NPS 3023	Midshipman Sea Time - Naval Engineering	3
NPS 3033	Midshipman Sea Time - Naval Operations and Communications	3
NPS 3043	Midshipman Sea Time - Fleet Work Simulator	3

Semesters VI and VII (One Year at Naval Forces Institute)					
Semester VI			Semester VII		
Required Credits: 16			Required Credits: 13		
NAV 4014	Ocean Navigation	4	NAV 4003	Navigation Team Training	3
NAV 4023	Coastal Navigation	3	NPS 4124	Communications and Intelligence	4
NAV 4033	Restricted Waters Navigation	3	NWR 4003	Bridge Warfare II	3
NPS 4003	Bridge and Ship Systems	3	NPS 4133	Capstone Project	3
NWR 4013	Bridge Warfare I	3			

NB 1. Naval Science students carry out various non-credit bearing naval training tasks throughout.

NB 2. Due to simulator and instructor constraints, courses (designated 'modules') at the Naval Forces Institute (NFI) are not necessarily given in the order above. This is deemed acceptable since modules are not interdependent and each discrete module is associated with previous study in the same subject.

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Police College

Degrees Offered

- Diploma in Criminal Justice
- Diploma in Law Enforcement
- Diploma in Border Security Operation
- Diploma in Auditing and Discipline Policing

Admission to programs

These program are only open to employees of Abu Dhabi Police and related security departments. Selection to the program is conducted annually by Recruitment and Selection Department by the General Head Quarters of Abu Dhabi Police. The entry requirements for the Diploma programs is jointly determined by the Abu Dhabi Police and HCT to meet the requirements of police staff officer as an employer and the standards for higher education as set by the Commission for Academic Accreditation.

Program Mission

The programs will provide graduates with the skills and responsibility, basic knowledge of police communication and leadership skills required by modern police operations, this will enable them to function effectively as staff police officers within Abu Dhabi Police.

Program Descriptions

The programs are designed to develop core business and policing skills, responsibilities, and competencies following the Abu Dhabi Police Dictionary of Competencies and are aligned to the National Qualifications Framework. The programs provide hands-on training as staff officers in the relevant field departments.

Program Learning Outcomes

In addition to the generic graduate outcomes related to the Diploma graduates of the Higher Colleges of Technology, students, upon completion of the programs, will be able to:

- Function with the basic competencies to undertake the tasks, duties and responsibilities of Law Enforcement officer operations.
- Communicate effectively and concisely base in relevant criminal law procedures as best Law Enforcement professional practise.
- Identify, Security operational rules and solving problems encountered in the practice of performing the role of Law Enforcement officer according to police code of conducts and values.
- Operate tasks, Law Enforcement supporting technology systems and social security aspects.

Completion Requirements

Diploma in Criminal Justice	
Diploma in Law Enforcement	
Diploma in Police Auditing and Discipline	
Students must successfully complete a minimum of 60 semester credits including:	
Security Studies Core Courses:	15 credits.
Security studies Electives:	6 credits
Diploma Major Core courses:	12 credits
Work Experience:	9 credits
General Studies:	18 credits

Diploma in Border Security Operation	
Students must successfully complete a minimum of 63 semester credits including:	
Security Studies Core Courses:	15 credits.
Security studies Electives:	6 credits
Diploma Major Core courses:	15 credits
Work Experience:	9 credits
General Studies:	18 credits

Security Studies Core Courses (compulsory)		
Required Credits: 24 (Work Experience is included)		
MAS 1003	Introduction to Law	3
PST 1003	Criminal Law	3
PST1023	Criminal Procedure	3
PST 1043	Police Skills & Responsibility	3
PST 1133	Traffic Law	3
PST 2009	Work Experience	9

Security Studies Electives		
Required Credits: 6		
PST 1033	Infantry Police And Practice	3
PST 1103	Weapon Science And Practice	3
PST 1123	Official Correspondence & Computer Skills	3
PST 1153	Maintaining Public Order	3
PST 2003	Performance Appraisal	3
PCJ 2023	Project Management for Law Enforcement	3
PST 2033	Islamic Culture	3
MAS 2133	Human Rights	3

Diploma in Criminal justice Core Courses		
Required Credits: 12		
PCJ 2003	Law & Procedure of Evidence	3
PCJ 2033	Criminal Investigations	3
PCJ 2043	Community Policing	3
PCJ 2053	Special Criminal Legislation	3

Diploma in Law Enforcement Core Courses		
Required Credits: 12		
PLE 2013	Management Punitive and Correctional Establishments	3
PLE 2053	Introduction to Criminology	3
PLE 2103	Management and Police Skills	3
PLE 2113	Police Applications and System Practise	3

Diploma in Border Security Operations Core Courses		
Required Credits: 15		
BSO 2003	Basic Airport Security I	3
BSO 2013	Aviation Safety and Security	3
BSO 2023	UAE Aviation Law And International Treaties	3
BSO 2103	Residence and Foreigners Affairs Procedures	3
BSO 2113	Quality Control (Airport Security Audit and Inspection)	3

Diploma in Auditing and Discipline Policing Core Courses		
Required Credits: 12		
PAD 2003	Basic of police audit and discipline	3
PAD 2013	Audit Inspection & Investigation	3
PAD 2103	Operational Auditing (tool, mothed)	3
PST 2013	Security Awareness	3

General Studies		
Required Credits: 18		
AES 1003	Emirati Studies	3
AES 3003	Proccessional Arabic	3
LSC 2183	English For Specific Purposes	3
LSS 1003	Life & Study Skills	3
LSS 2403	Innovation and Entrepreneurship	3
LSS 2533	Research Methods	3

Recommended Sequence of Study

Diploma in Criminal Justice

Course Code	Course Title	Course Credits
Year 1 Semester 1		
Total Credits: 15		
AES 1003	Emirati Studies (GS)	3
AES 3003	Processional Arabic (GS)	3
LSS 2533	Research Methods (GS)	3
MAS 1003	Introduction to Law (CC)	3
PST 1043	Police Skills & Responsibility	3
Year 2 Semester 1		
Total Credits: 18		
PCJ 2033	Criminal Investigations I (CJ)	3
PCJ 2053	Special Criminal Legislation (CJ)	3
PST 1003	Criminal Law (CC)	3
PST 2009	Work Experience (CC)	9

Course Code	Course Title	Course Credits
Year 1 Semester 2		
Total Credits: 15		
LSS 1003	Life & Study Skills (GS)	3
PST 1023	Criminal Procedure (CC)	3
PST 1133	Traffic Law (CC)	3
LSC 2183	English For Specific Purposes (GS)	3
LSS 2403	Innovation and Entrepreneurship (GS)	3
Year 2 Semester 2		
Total Credits: 12		
PCJ 2003	Law & Procedure of Evidence)	3
PCJ 2043	Community Policing (CJ)	3
PST XXXX	Elective Course	3
PST XXXX	Elective Course	3

Diploma in Law Enforcement

Course Code	Course Title	Course Credits
Year 1 Semester 1		
Total Credits: 15		
AES 1003	Emirati Studies (GS)	3
AES 3003	Processional Arabic (GS)	3
PST 1043	Police Skills & Responsibility	3
LSS 2533	Research Methods (GS)	3
Year 2 Semester 1		
Total Credits: 18		
PST 1003	Criminal Law (CC)	3
PST 2009	Work Experience (CC)	9
PLE 2013	Management Punitive and Correctional Establishments(LE)	3
PLE 2053	Introduction to Criminology(LE)	3

Course Code	Course Title	Course Credits
Year 1 Semester 2		
Total Credits: 15		
PST 1133	Traffic Law (CC)	3
PST 1023	Criminal Procedure (CC)	3
LSC 2183	English For Specific Purposes (GS)	3
LSS 2403	Innovation and Entrepreneurship (GS)	3
LSS 1003	Life & Study Skills (GS)	3
Year 2 Semester 2		
Total Credits: 12		
PLE 2103	Management and Police Skills (LE)	3
PLE 2113	Police Applications and System Practice (LE)	3
PST XXXX	Elective Course	3
PST XXXX	Elective Course	3

Diploma in Police Auditing and Discipline

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Total Credits: 15			Total Credits: 15		
MAS 1003	Introduction to Law (CC)	3	PST 1133	Traffic Law (CC)	3
PST 1043	Police Skills & Responsibility	3	PST 1023	Criminal Procedure (CC)	3
LSS 2533	Research Methods (GS)	3	LSC 2183	English For Specific Purposes (GS)	3
AES 1003	Emirati Studies (GS)	3	LSS 2403	Innovation and Entrepreneurship (GS)	3
AES 3003	Processional Arabic (GS)	3	LSS 1003	Life & Study Skills (GS)	3
Year 2 Semester 1			Year 2 Semester 2		
Total Credits: 18			Total Credits: 12		
PAD 2003	Basic of police audit and discipline(AP)	3	PAD 2013	Audit Inspection & Investigation (AP)	3
PST 2013	Security Awareness(AP)	3	PAD 2103	Operational Auditing (tool, Method) (AP)	3
PST 1003	Criminal Law (CC)	3	PST XXXX	Elective Course	3
PST 2009	Work Experience (CC)	9	PST XXXX	Elective Course	3

Diploma in Border Security Operations

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Total Credits: 15			Total Credits: 15		
MAS 1003	Introduction to Law (CC)	3	PST 1133	Traffic Law (CC)	3
PST 1043	Police Skills & Responsibility	3	PST 1023	Criminal Procedure (CC)	3
LSS 2533	Research Methods (GS)	3	LSC 2183	English For Specific Purposes (GS)	3
AES 1003	Emirati Studies (GS)	3	LSS 2403	Innovation and Entrepreneurship (GS)	3
AES 3003	Processional Arabic (GS)	3	LSS 1003	Life & Study Skills (GS)	3
Year 2 Semester 1			Year 2 Semester 2		
Total Credits: 18			Total Credits: 15		
BSO 2003	Basic Airport Security I (BS)	3	BSO 2023	UAE Aviation Law And International Treaties(BS)	3
BSO 2013	Aviation Safety and Security(BS)	3	BSO 2103	Residence and Foreigners Affairs Procedures(BS)	3
PST 1003	Criminal Law (CC)	3	BSO 2113	Quality Control (Airport Security Audit and Inspection) (BS)	3
PST 2009	Work Experience (CC)	9	PST XXXX	Elective Course	3
		3	PST XXXX	Elective Course	3

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FOUNDATIONS





Foundations

The Foundations Studies Programme supports students needing assistance in meeting career programme entry requirements. The regular Foundations Studies Programme consists of four levels of English preparation and two levels of Mathematics; a third level of advanced Mathematics is also required for students who wish to enter an Engineering Bachelor Programme. Depending on a student's entry level scores, a student may spend up to one year preparing to meet degree admission criteria.

Course Offerings in Foundations

Foundation English Courses		Foundation Mathematics Courses	
FND 1016	Foundations English Level I	FND M010	Foundation Mathematics I
FND 2016	Foundations English Level II	FND M020	Foundation Mathematics II
FND 3016	Foundations English Level III	FND M030	Foundation Mathematics III
FND 4016	Foundations English Level IV		

Maximum duration of study: 1 Academic Year

Program Learning Outcomes

- PLO 1 Reading: Read independently employing a range of reading strategies. Read a broad range of articles, reports, and introductory academic texts, being able to extract important specific details and understand overall global meaning, demonstrating comprehension in a variety of ways.
- PLO 2 Writing: Write clear, detailed texts on a broad range of topics, demonstrating a solid command of an intermediate level of grammar and a broad range of vocabulary. Formulate arguments in a coherent way and demonstrate an awareness of text organisation. Demonstrate an ability to review and self-edit.
- PLO 3 Listening: Demonstrate an ability to understand extended speech typical of academic lectures on a range of general topics and typical news programs at natural speeds and to extract gist and detail.
- PLO 4 Speaking: Demonstrate an ability to interact fluently with native speakers, taking an active part in discussions. Present clear detailed descriptions and explanations on a wide range of subjects.
- PLO 5 Grammar: Demonstrate a solid understanding of grammar at the intermediate level as defined by the Foundations Level 4 Curriculum, and demonstrate full command of punctuation and capitalization.
- PLO 6 Vocabulary: Demonstrate understanding of all words on the Curriculum Vocabulary List, including an understanding of the multiple meanings of a broad range of words.
- PLO 7 Study Skills: Demonstrate a range of good study skills and behaviors: punctuality, participation in class activities, timely completion of homework and assignments, ability to schedule and complete independent study and review, organisation as regards materials and equipment, and the use of English as the medium of communication in class.
- PLO 8 ICT: Effectively use the iPad to learn and practice English, to access course materials, and to participate in course activities. Use the internet to search for information. Use the keyboard effectively to write. Effectively use shared folders in the cloud.
- PLO 9 Understand and apply the mathematical concepts of: (1) Ratio, Proportion & Percentages, (2) Basic Geometry, (3) Measurement and Data Analysis, (4) Real Numbers, (5) Simple Linear Equations, (6) Exponents and Polynomials





GENERAL STUDIES

DIVISION





General Studies Division

Divisional Mission

The Division of General Studies is dedicated to supporting, developing and mentoring all HCT students to reach their full communicative, intellectual, literacy and vocational skills potential.

This is achieved through a cross-curricula approach that challenges students to reflect and develop holistically by providing them with continual Learning by Doing opportunities that broaden their global perspective, critical thinking, problem-solving and information synthesis skills in preparation for the knowledge economy of the 21st Century in line with the UAE Vision 2021.

Senior Staff

Executive Dean: **Dr. Philip Quirke**

Admission to program

As per details in each Academic Division

Program Description

General Studies form a set of courses that all students must complete. General Studies complement core courses by challenging students to reflect and develop holistically. A continuous applied learning approach is offered that broadens students' global perspective, critical thinking, problem-solving and information synthesis skills in preparation for the knowledge economy of the 21st century. This is in line with the UAE Vision 2021.

The structure of the General Studies (GS) Courses is aligned with the CAA Standards for Licensure and Accreditation (2011) and consists of the following categories:

- **English, Arabic or other Languages;**
- **Humanities or Arts;**
- **Information Technology or Mathematics;**
- **The Natural Sciences;**
- **The Social or Behavioural Sciences.**

Program Learning Outcomes

Graduates will be able to:

- Communicate effectively orally and in writing and deploy a range of presentation and information retrieval techniques within both learning and workplace settings.
- Recognize artistic expressions and scientific methods and their impact in the modern world through analysis and reflection on practical experience.
- Demonstrate the ability to work effectively in teams and take on leadership roles.
- Recognize, examine and compare relationships and sequences within international diverse cultures and seemingly random social and historical events.
- Use effectively information technology techniques in the work environment.
- Reflect on the attitudes and beliefs relevant to individual and social choices and actions.
- Demonstrate a knowledge of mathematics and its application in various contexts.

Completion Requirements

As a graduation requirement, students must successfully complete the following minimum credits:

Bachelor students:	33 credits
Higher Diploma students:	30 credits
Diploma students:	18 credits

Mandatory Courses

General Studies courses which are mandatory for all students to take include:

AES 1013	Arabic Communications I
AES 1003	Emirati Studies
LSS 1003	Life and Study Skills
LSS 1123	Basic Methods of Scientific Research and Development
LSS 2403	Innovation and Entrepreneurship

Course Credits

English, Arabic or other Languages

Required Credits: 15

AES 1013	Arabic Communications I	3
AES 2003	Arabic for non-Native Speakers	3
AES 3003	Professional Arabic	3
LSC 1013	Introduction to Chinese Language and Culture	3
LSC 1103	Academic Reading and Writing I	3
LSC 1503	Academic Spoken Communication	3
LSC 2103	Academic Reading and Writing II	3
LSC 2183	English for Specific Purposes	3
LSC 2203	English for the Workplace	3
LSC 2213	English for Leadership	3
LSC 2223	Critical Thinking in English	3
LSC 2233	Intercultural Communications in English	3
LSC 2243	Ethical Communications in English	3

Humanities or Arts

Required Credits: 3

AES 1003	Emirati Studies	3
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Information Technology or Mathematics

Required Credits: 3

LSM 1003	Applied Mathematics	3
LSM 1103	Technical Mathematics	3
LSM 1113	Statistical Mathematics	3
LSM 1123	Quantitative Reasoning	3
MTH 1113	Statistics for Engineering	3

The Natural Sciences

Required Credits: 3

AHM 1203	Aviation Physics	3
EDU 1803	Introduction to Math and Science in the Classroom	3
HSC 1013	Human Biology	3
HSC 1233	Human Growth and Development	3
LSN 1113	Introduction to Sustainability	3
LSN 1303	Health and Wellness	3
LSN 2433	Ecology	3
LSN 2503	Introduction to Nutrition	3
PHY 1103	Physics I	3

The Social or Behavioural Sciences

Required Credits: 9

LSS 1003	Life and Study Skills	3
LSS 1123	Basic Methods of Scientific Research and Development	3
LSS 2403	Innovation and Entrepreneurship	3

<i>Total Required Credits</i>	33
<i>Maximum Duration of Study</i>	6
<i>Minimum Duration of Study</i>	4
<i>Programme Code</i>	GS1617

Recommended Sequence of Study

As per details in each Academic Division

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- Faraj, Hamda**, Master of Education, Deakin University
- Fernando, Bindu**, Master of Arts - English, MS University, India
- Festa, Monica**, Master of Science, Science of Instruction, Drexel University, Philadelphia PA
- Firas Al Sammarraie**, Master: in Language and Grammar, University of Basra
- Gajer, Ewa**, Ph.D, Literature, University of New England
- Ganess Sewbaran, Shivani**, Master of Education, University of Southern Queensland
- Gill, Parminder**, Master of Arts in TEFL, The University of Reading
- Gladwin, Mary**, Masters in Education and Training, Universite de Provence
- Gobert, Melanie**, Doctor of Education, University of Phoenix
- Grant, Walter**, Master of Arts (English Language Teaching), The Middle East Technical University
- Green, Felicity**, Masters in Applied Linguistics, University of Southern Queensland
- Hall, Jane**, Master of Arts, TESOL, Victoria University of Wellington
- Hamada, Tarek Hamada**, Master of Education, British University in Dubai
- Hanif Ibrahim, Muhammad**, Master of Arts, Linguistics, University of New England
- Harran, Marcel**, Doctorate in English, Professional Writing, Rhodes University
- Hartley, Grant**, Master of Science, TESL, Aston University
- Hasan Hasan Ebraheem Al Ali, Mariam**, Master: Arabic Language and Literature, University of Jordan
- Hawarna, Buthaina**, Master, Arabic and Islamic Studies, Al Imam Al Ouzai College
- Hayes, Janet**, Master of Business Administration, Concordia University Montreal, Masters of Applied Linguistic, Masters of Education Research, Exeter University
- Hearn, Carolyn**, Master of Education, International Teaching, Framingham State University
- Henderson, Sheri**, Master of Science, Educational Management in TESOL, Aston University
- Hiasat, Lana**, Master of Arts Cultural and Media Studies, The Open University, UK, Master of Teaching English as a Second Language, Arizona State University, USA
- Hussein, Hinda**, Master of Arts, Health Education, East Carolina University
- Ibrahim, Abdulla**, Master: in Applied Science, Sharjah University
- Ibrahim, Ehab**, Ph.D, Arabic Language and Literature, Ain Shams University
- Ikhdair, Ameen**, Master of Arabic Language and literature- linguistics, University of Jordan
- Jacob, Annie**, PhD Education, Kuvempu University
- James, Aleya**, Master of Arts, TEFL, Reading University UK
- Jeddi, Abdelbasset**, Master of Arts, TESOL , American University of Sharjah
- Johnston, Andrew**, Masters of Education, International Education, Monash University
- Jones, Doug**, Master of Fine Arts, The University of Idaho, University of Southern California
- Joudeih, Hanan**, MBA, Middle East Canadian Academy of Technology
- Kaakeh, Mona**, Masters, Arabic Literature Applying Linguistics, Aleppo University
- Kane, Patrick**, Masters in History, Temple University, Binghamton University
- Kennedy, Lynne**, Master of Arts, Human Resource Management, Middlesex University
- Kennedy, Robert**, Master of Arts, TESOL, University of Ulster
- Kettell, Nadia**, Ph.D in Environmental Biology, University of London
- Khamis Al Arfati, Noura**, Master, Education Studies, Deakin University
- Khamis Albedwaw, Alyaa**, Ph.D, Islamic Studies, Islamic & Arabic Studies College
- Khelifa, Malika**, Master of Science, TESOL, Aston University
- Kinsella, Katrina**, Master of Science, Organizational Psychology, London School of Economics
- Kinuthia, Heather**, Master of Arts, Education, Gender, and International Development, Institute of Education
- Knott, David**, Master of Arts, English with American Studies, Adam Mickiewicz University in Poznan
- Koc, Ces**, Ph.D in Mathematics, Hacettepe University
- Koul, Swapneela**, Master of Arts, English Language Teaching, Amman Arab University
- Kristel O'Sullivan**, Kristel, Masters in Applied Linguistics, The University of Melbourne
- Lahcen, Boutlelis**, Master of Arts, General and Applied Linguistics, University of Ulster
- Latifa Dorabi**, Master: in Family Counseling and Social Work - Applied Sociology, University of Sharjah
- Lavin, Jennie**, Master of Business Administration, The University of Warwick
- Lionnet, Marie**, Masters in English, Universite de Reims Champagne
- Liwa, Krisztina**, Masters in International Relations, Budapest University of Economics
- Loughran, Peter**, Master of Arts, Digital Technologies and Communication in Education, University of Manchester
- Maarouf, Imad**, Master of Education Leadership, Abu Dhabi University
- Makarevicius, Algirdas**, Ph.D, Linguistics, Moscow State Linguistic University
- Mannering, Napoleon**, Master of Arts, Teaching English to Speakers of Other Languages and Information and Communications Technology, University of Leeds
- Marie Ibrahim Haddad, Khaldoon**, Master, Language & Syntax, Yarmouk University
- Martin, Ian**, Master of Arts, Education, The Open University UK
- Marzouq Abid Harrash Al Dhuhoori, Abid**, Master, Administration & Curriculum, American University in Dubai
- Maszka, John**, Master of Arts, Communication Studies. Master of Arts, Political Science, Northern Illinois University
- Mawer, Luke Mawer**, Master of Arts, TESL, University of Sunderland
- McElveen, Hugh**, Master of Arts, Visual and Critical Studies, Dublin Institute of Technology
- McAlister, Deirdre**, Ph.D, History/Anthropology, National University of Ireland Maynooth
- Mccarthy, Robert**, Master of Arts, Linguistics, University of Technology Sydney
- McKeurtan, Maureen**, Master in Applied Linguistics, University of Nottingham
- Mclaughlin, James**, Doctor of Education, University of Exeter
- Mcparland, Sinead Mary**, Ph.D, Neuropsychology, University of Ulster
- Michell, Colin**, Master of Arts, Linguistics, University of South Africa
- Millie, Daniel**, Master of Business Administration, Deakin University
- Mohamed, Sameirah**, Master of Education, Deakin University / Higher Colleges of Technology
- Mohammad, Nayela**, Master of Education, International Management, The British University in Dubai
- Mohmmad Hussin Basharat, Ahmad**, Ph.D, Arabic Language and Literature, Yarmouk University
- Molton, Stephen**, Master of Arts, TESOL, The University of Edinburgh
- Monney, Melissa**, Master of Arts, Teaching, Georgia State University
- Mothershaw, Ann**, Ph.D, Microbiology, The Open University
- Moza Al Mansoori**, Bachelor in Arabic Language & Literature, UAE University
- Murry, Sean**, MFA in Creative Writing, University of New Orleans

- Mustafa, Ghassoub**, Doctorate in Education, Education, Exeter University
- Najeya Al Ali**, Ph.D: in Literature, Story, Poem, Theater and Curriculum, College of Arts - Alexandria University
- Neumann, Michael**, Master of Arts, Education, The University of Kansas
- Obaid Ebraheim Abdulla Al Zaabi, Rasha**, Bachelor of Education, Fujairah Women's College
- O'Connor, Brendan**, Master of Education, Mount Saint Vincent Univ.
- Ould Scheikh Sidiya, Ibrahim**, Master, Arabic Language & Literature, University of Sharjah
- Oxtoby, Philip, Master of Arts**, Teaching English for Young Learners, University of York
- Parker, Carmel-Anne**, Master of Arts, English Language Teaching, The University of Limerick
- Payab, Lamba**, Master of Science, Statistic Business and IT, University of Portsmouth
- Peel, Richard**, Master of Science in TESOL, Aston University
- Piric Mesic, Alma**, Master of Arts in TESOL, St. Michael's College
- Pollitt, Anthony**, Master of Arts, Applied Linguistics, Victoria University of Wellington
- Puliatti, Anna**, Master of Arts, Applied Linguistics, Macquarie University
- Quddoumi, Sana**, M.Sc, Computing and Information Technology, University of Hull, M.Sc, Mathematics, University of Sindh
- Rainey, Elizabeth**, Master of Arts, Linguistics/ Teaching English as a Second Language, University of Portsmouth
- Rajan, Panthayil Babu**, Ph.D, Population Studies, International Institute of Populations Studies
- Rashed Obaid Abdulrahman, Ayesha**, Bachelor, Economics and Law, University of Jazeera in Dubai
- Rea, Nicholas**, Master of Arts, TEFL, University of Reading
- Rehab, Dalia Rehab**, Masters in Applied Linguistics, Northeastern Illinois University
- Richards, Julie**, Master of Education, Educational Management, Sheffield University
- Riverin, Johanne Riverin**, Master of Arts, Education, The Johns Hopkins University / University of Calgary
- Ruqeya Al Ketbi, Ruqeya Al Ketbi**, Bachelor, Arabic Language, Sharjah University
- Ryan, Jennifer**, Master of Education, Murdoch University
- Sadhvani, Pushpa**, Master of Education, Teaching of English, British University in Dubai
- Sadiya, Ibrahim**, Masters in Arabic Language, University of Sharjah
- Saeed Alkhatiri, Kulaitheem**, MA Arabic Literature, College of Islamic and Arabic Studies
- Saeed Rashed Omair Al Rahbi, Safeya**, Bachelor, Education/ History, UAE University
- Saida, Kausar**, Ph.D, Jawaharlal Nehru Technological University
- Saleh, Maha**, Master, Arabic Language and Literature, University of Jordan
- Salim Al Teneji**, Salim Al Teneji, PHD Educational Administration, UAE University
- Salizar, Neda**, Doctorate in Philosophy, University of Santo Tomas
- Scott, Corey**, Master of Applied Linguistics, University of Southern Queensland
- Senall, Marc**, Master science technology, Arizona State University
- Shahdoor, Maitha**, Master of Education, TESOL, British University in Dubai
- Shaikha Al Arai, Shaikha Al Arai**, Ph.D: in Arabic Grammar and Language, Islamic & Arabic Studies College Dubai
- Shammas, Nicole**, Master of Arts, TESOL, School for International Training, Vermont, U.S.A., University of Southern Queensland, Australia
- Shanley, Scott**, Masters, TESOL, The University of Sydney
- Sheetz, Dean**, Ph.D, Organization and Management, Capella University
- Shefa Yaseen**, Master: in Arabic Language -Modern Arabic Literature, Nile Valley University - College of Graduate Studies in Sudaan
- Solas, Eddia**, Doctorate of Philosophy, Chemistry, University of the West Indies
- Southby, Belinda**, Master of Science, TESOL, Aston University
- Stanfield, Peter**, Ed.D, The University of Exeter
- Suleiman Mohammad Al Ghannam, Mamon**, Master, Arabic Language and Literature, University of Jordan
- Sutton, Frances**, Master of Educational Technology, University of Southern Queensland
- Zsulczewski, Maureen**, Master of Education, University of Southern Queensland
- Taha Abdellatif Ayyal Salman, Ahed**, PhD, Arabic Language & Literature, Mu'tah University
- Tanyongana, Chenjerai**, Master of Arts, Physical Culture, Instituto Superior de Cultura
- Tarwood, James**, Master of Arts, English Language, Southern Illinois University
- Tayel, Ahmed Tayel**, Mof Arts, Applied Linguistics, Alexandria University
- Thompson, Sophy**, Ph.D in Botany, University of Delhi
- Thornton, Peter**, Mater of Arts Education, The Open University UK
- Tobias Prior, Edmund**, Master of Arts, TESOL, Institute of Education
- Torrecilla Navarro, Marcelino**, Master of Arts, Language Teaching and Learning, The University of Liverpool
- Tradat, Bassam**, Masters, Arabic Language and Literature, Yarmouk University
- Trethewey, Miles**, Master of Education, Masters in Applied Linguistics, University of Southern Queensland
- Trinder, Stephen**, Master of Arts, Intercultural Communication, Anglia Ruskin University
- Turner, Jonathan**, Master of Science, TESOL, Aston University
- Vajpeyi, Anamika**, Master of Arts in Psychology, Allahabad University
- Valentino, Silvia**, Master of Fine Arts, San Diego State University
- Vevers, Mark**, Master of Arts, Online and Distance Learning, The Open University
- Vrhovnik, John**, Master of Arts, TESOL, University of London IOE
- Walker, Carly**, Masters in Health Promotion, Deakin University
- Wallace, Julie**, Master of Arts, TESOL, University of Manchester
- Wallace, Julie**, Master of Education, University of Southern Queensland
- Waqas, Sumiya**, Bachelor of Medicine, University of the Punjab
- Watkins, Joseph**, Master of Arts, Linguistics – English as a Second Language Option, California State University, Fresno
- Wheeler, Gehan**, MA TEFL, American University in Cairo
- Whelan, Emmet**, Master of Arts, TESOL, The University of Edinburgh
- White, Tim**, Master of Arts in Applied Linguistics & TESOL, University of Leicester
- Wright, Heather**, Master of Arts, English Literature, University of North Umbria
- Yaqoob Yousef Abualreesh Almansoori, Mashael, Master**, Educational Leadership, Zayed University
- Yusaf, Zarina, Master of Arts**, Teaching English to Speakers of Other Languages, University Of Technology Sydney
- Zammel, Gilllian**, Master of Arts in TESOL, University of Nottingham





كليات التقنية العليا
HIGHER COLLEGES OF TECHNOLOGY

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APPENDIX

Course Descriptions

ACC 1003	Financial Accounting
<p>Introduces students to accounting as the language of business. It covers understanding of the terminology, accounting principles, the fundamentals of double entry, the accounting process from journals to preparation of financial statements, adjusting entries and adjusted financial statements and how financial statements communicate information about performance and position to users external to the business.</p>	
CREDITS: 3.00	

ACC 1103	Managerial Accounting
<p>Introducing a business-management approach to the use accounting information for internal reporting and decision-making is crucial in developing managerial skills. Providing in-depth knowledge in cost accounting by focusing on its role in internal reporting and the resulting decision making processes contributes to the development of analytical skills. The major topics of managerial accounting include profit planning and control measures, comparison of the effects of absorption and variable costing on net income and preparation of master budgets.</p>	
CREDITS: 3.00	

ACC 2003	Cost Accounting
<p>Introduction of core concepts of cost accounting is expected to play an important role in managerial decision making. Providing in depth knowledge on cost accounting information, application of job costing in a business organization, different issues related to process costing, an understanding of activity based costing and joint cost allocation in a service organization contributes in the managerial decision making process.</p>	
CREDITS: 3.00	

ACC 2103	Intermediate Financial Accounting I
<p>Deals with accounting principles and procedures essential to the preparation of financial statements with particular emphasis on the corporate form. Topics covered include preparation of financial statements including cash flow statements, valuation of current assets, inventory valuation methods, and recording of transactions related to property, plant and equipment.</p>	
CREDITS: 3.00	

ACC 3003	Intermediate Financial Accounting II
<p>Provides in-depth knowledge on applications of accounting for investments that companies make in stock and debt securities of other companies, including accounting for the different forms of partnership, timing and criteria for revenue recognition, as well as accounting treatment of retired shares and buyback. It also covers preparation of shareholders' equity section of balance sheet, as a foundation for a more detailed study of financial statements.</p>	
CREDITS: 3.00	

ACC 3013	Taxation
<p>Understanding tax concepts and issues is important for all accounting students. Provides an overview of individual taxable income and tax liability, taxable and exempt benefits, property income, pension, assessable trading income, partnership and limited liability partnership, chargeable gains for individuals, tax administration for individuals, inheritance tax, corporation tax and Value Added Tax.</p>	
CREDITS: 3.00	

ACC 3113	Auditing
<p>Provides students with an understanding of the purpose and objectives of accounting/financial audits. Analyzes different audit areas, including professional standards and ethical responsibilities of auditors, audit risk and materiality, risk assessments for internal control, internal control for cash receipts and disbursement cycle. It additionally covers audit evidence and reporting on audited financial statements, using real life examples.</p>	
CREDITS: 3.00	

ACC 4003	Accounting Information Systems
<p>Introduces the concepts, components and functions of an Accounting Information System (AIS). Provides an understanding of the fundamental attributes of accounting information systems, business processes, the related internal controls and associated risks. It also deals with ethical issues and the risks of fraud in accounting information systems, revenue collection and expenditure processes.</p>	
CREDITS: 3.00	

ACC 4013	International Financial Reporting Standards
<p>Introduces the structure and requirements of International Financial Reporting Standards (IFRS) in a current financial reporting environment. Provides basic understanding of IFRS and IFRS framework, Presentation of Financial Statements, Inventories, Statement of Cash Flows, Accounting Policies, Construction Contracts and Property. It deals also with Plant and Equipment, Leases, Revenue Recognition, Accounting for Government Grants, Borrowing Costs, Effects of changes in Foreign Exchange Rates, Financial Instruments and Earnings Per Share issues.</p>	
CREDITS: 3.00	

ACC 4023	Advanced Management Accounting
<p>Develops analytical skills for managerial decision making. Introduces concepts of advanced managerial accounting to help in servicing the informational needs of managers in planning, organizing and controlling functions. Provides in-depth knowledge on flexible budgets, variances based on standard costs, performance of responsibility centres, role of non-financial performance measures and differential analysis in managerial decision making.</p>	
CREDITS: 3.00	

ACC 4033	Accounting for Decision Making and Control
Provides an understanding of product management, pricing, costs drivers and cost control for decision making and control. Identifies the role of opportunity costs in capital budgeting decision. Introduces accounting and non-accounting measures of performance in an organizational architecture, cost allocation issues and techniques and role of management accounting in a changing environment.	
CREDITS: 3.00	

ACC 4043	Advanced Auditing
Provides students with an in-depth understanding of the regulatory environment, professional standards, audit processes, advanced auditing techniques and contemporary issues in auditing. It reviews the auditor's role in ensuring that publically issued financial statements are fairly presented. Audit procedures for financial transaction cycles as well as testing techniques for analytical reviews are discussed. It also deals with statistical sampling and tests of controls while planning, performing and evaluating samples for substantive procedures.	
CREDITS: 3.00	

ACC 4053	Advanced Financial Accounting
Provides knowledge of lease accounting, and the different forms of leases that can be used in an organization. It deals with analysis of accounting changes and errors, application of appropriate steps to adjust financial statements, including issues dealing with income statement content, presentation and disclosure. It also covers the preparation of consolidated financial statements for business combinations using equity, initial value and partial equity methods.	
CREDITS: 3.00	

ACC 4113	Investment Analysis
Introducing financial theories, models and market information is necessary throughout changing investment opportunities, problems and controversies. Provides in depth understanding of portfolio and capital market theory, analysis, valuation and management of common stock, different techniques of security analysis, types of derivative securities, management of different investments, Islamic Finance and Islamic banking and its products.	
CREDITS: 3.00	

ACC 4123	Cost Management
Provides knowledge and understanding on the role of cost management in strategic planning and decision making. Applies benefit, cost and variance analysis to evaluate an organizations' strategic plans and deals with issues related to implementing activity based costing systems and activity based management. Also covers managing customer profitability according to customer type, cost estimation, application of financial and cost volume profit models, including the use of decision trees in cost management and decision making.	
CREDITS: 3.00	

ACC 4133	Accounting Systems Performance Management
Performance management entails the performance analysis of business organizations through selected variances and management by exceptions. Identifies the relevant accounting information for special order pricing, outsourcing, allocating constrained resources and keeping or eliminating operations. Topics covered also include performance evaluation in decentralized organizations and construction and interpretation of financial statements including cash flow statements	
CREDITS: 3.00	

ACC 4143	Management Control Issues
Deals with the nature, scope, and mode of operation of management accounting and control systems. Identifies salient issues and assesses the impact of change, information technology, accountability, governance and ethics on management accounting and control systems. Provides an understanding of the essentials of project management, the major tasks in project initiation, planning, and the various stages in project implementation.	
CREDITS: 3.00	

ACC 4153	Financial Reporting
Provides knowledge of advanced methods used for analysis of financial statements, as well as extensible business reporting language, business valuations, leases and off balance sheet debts. It includes the accounting treatment of selected items of financial statements which includes accounting for bonds, provisions and contingencies, pensions, income tax, goodwill, marketable securities and investments and accounting for merger and acquisitions.	
CREDITS: 3.00	

ACC 4163	Government and Non- Profit Accounting
Provides basic understanding of various aspects of accounting and financial reporting of government and not for profit organizations. It looks at the role of fund balances, public sector accounting standards, accounting treatment of revenue and expenditure in Governmental Funds. The course also covers Government Wide Statements, accounting for special purpose entities such as Hospitals, Colleges and Universities, as well as other Not-for-Profit entities.	
CREDITS: 3.00	

ACC 4173	Contemporary Issues in Accounting
Contemporary Issues in accounting focuses on modern concepts and emerging trends in accounting. It reflects on the issues that are being considered in professional practice such as approaches to measurement, fair value accounting, the conceptual framework for financial reporting, corporate governance, environmental accounting and sustainability, earnings management, as well as the financial indicators of corporate collapse and principles of Islamic Accounting.	
CREDITS: 3.00	

ACC 4203	Accounting Research Project
The final integrative project has a standardized framework within which research projects of various majors can be accommodated to meet all program learning outcomes. The final project gives opportunities for the application and critical review of theory synthesizing the knowledge obtained from several specialization courses.	
CREDITS: 3.00	

ADF 3003	Air Defence Systems
The organisation, equipment and concept of operations of ground and air based Air Defence assets and formations of the UAE and Allied Forces. Systems considered include ground and maritime weapons systems, communications systems, and aircraft.	
CREDITS: 3.00	

ADF 3013	Air Defence Tactics
The main principles of Air Defence Tactics involving the early warning units, strategic air defence units, airborne air defence and command and control of air defence units. The course covers the integration of ground based and airborne early warning units, ground based weapons and communication systems. The employment of strategic air defence units are discussed and the integration of air defence units attached to Land Forces.	
CREDITS: 3.00	

ADF 3103	Air and Space Power
Air Forces Organization and Weapons, Types and Methods of Air Attack, Air Superiority and Counter Air Operations, Strategic Attack, Close Air Support, Air Interdiction, Air Mobility, Intelligence Surveillance and Reconnaissance, Air Operations Management, C2 Principles, Air Space Control, Electronic Warfare, Discussions, Airbase Visit and Air Operations Centre Visit.	
CREDITS: 3.00	

ADF 4003	Tactical Communications Systems
Students examine the unique communications requirements of military forces and will study the equipment and protocols in use for secure and insecure voice and data communications. Students will look at a range of systems in use by the UAE and Allies, in particular those systems used for Air Defence command and control used to build a tactical view of the air and land battlespace.	
CREDITS: 3.00	

ADF 4013	Land Forces Organisation and Weapons
The organisation, structures, equipment and capabilities of individual Land Force formations and organisations are examined in the context of the military effect they would be expected to achieve. Students then determine how individual formations and organisation are assembled together to provide a larger capability for detachment or deployment.	
CREDITS: 3.00	

ADF 4112	Airspace Management
Explains how civilian and military air-space is managed through structures and regulations for safety and security. Students will learn Rules of the Air, General Airspace Division and Classification, UAE ATC Organization, UAE Military Airspace, Aeronautical Documentation, Civil Control Techniques, Fighters in a Training Zone, Separation Norms, Picture Building Airspace, UAE AOC Divisions, Air Tasking Orders, Airspace Co-ordination, COMPLAN and SPINS, AP Mission Brief.	
CREDITS: 2.00	

ADF 4123	Fighter Control
Fighter Control capability is discussed, from the history of the first use of Fighter Controllers to the modern capability. Fighter Control organisations and functions are reviewed, to include Control and Reporting Centres, Airborne Early Warning, and C4ISR. Personnel roles within Fighter Control organisations are also reviewed.	
CREDITS: 3.00	

ADF 4134	Aircraft Recognition
Aims at providing students with the skills of recognition of different national, regional and international aircraft. The course includes technical and tactical aircraft recognition points, the importance of Aircraft Recognition, How to update and find new Aircraft types, Practical Exercise Aircraft fact finding, recognitions of Fighter aircraft, Bombers, Reconnaissance aircraft, Training aircraft, Transport aircraft, Helicopters, Unmanned aerial vehicles (UAV) and Missiles, and Area Countries Aircraft.	
CREDITS: 4.00	

ADF 4207	Ground Based Air Defence Systems Operation
Students deploy and practice the use of ground based air defence assets. Equipment specifications, modes of operation and tactics for use are discussed and students will carry out live or simulated operation of the equipment against a simulated threat.	
CREDITS: 7.00	

AES 1003	Emirati Studies
Fostering citizenship through introducing the students to the major social aspects of UAE society values and heritage, offer studies in variety of important fields related to UAE history, geography, internal and external political aspects, social development and services provided by UAE, woman empowerment, UAE approach to knowledge based community, multiculturalism, developments in infrastructure, economy and technology and UAE position in the global competitiveness. Presents future visions for development strategical plans and its challenges	
CREDITS: 3.00	

AES 1013	Arabic Communications I
Enhancing proficiency and skills in the Arabic language by developing solid knowledge and competencies in both productive (speaking/writing) and receptive skills (reading/ listening) are fundamental for graduates. The course adopts an integrated approach with an emphasis on current professional use of Arabic by engaging with standard, modern, and integrated topics to enhance knowledge and communication skills.	
CREDITS: 3.00	

AES 2003	Arabic for Non-Native Speakers
This is a course aimed at developing Arabic language skills for non Arabic speakers (reading, writing, speaking and listening), grammar, and vocabulary. The students will learn and practice the basic communication skills that will get them engaged with their culture, study, and work requirement.	
CREDITS: 3.00	

AES 3003	Professional Arabic
Enhancing professional Arabic skills for the workplace, focusing on the needs of management professionals in a cross-cultural environment, while improving communication skills effectively in both oral and written media as applied in workplace related situations.	
CREDITS: 3.00	

AET 2103	Fundamentals of Flight
Understand the basic aspects of atmospheric flight, the aerodynamic characteristics of airplanes and the engine performance, as well as how the geometric shape of the airplane influences these properties. Perform analysis on steady and accelerated flights.	
CREDITS: 3.00	

AET 2403	Applied Thermofluids
Properties a pure substance, First and second laws of thermodynamics, analysis applied to different systems and control volumes, Thermodynamics applications. Fluids and their properties, Conservation equations and their applications.	
CREDITS: 3.00	

AET 2902	Sophomore Design Project
Sophomore project requires the formation of a team to propose, plan design and prototype an open ended project. The student team is totally responsible for the completion of the project milestones and course objectives while working under the mentorship of a faculty or industry engineer. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation and prototyping schedule, and estimated cost.	
CREDITS: 2.00	

AET 3101	Aeronautical Engineering Lab
Basic measurements of aerodynamic forces and pressure distribution using low speed wind tunnel, flight demonstration, wind tunnel experiments, Jet propulsion, Basic aircraft sensors. Bending of Aircraft Wing, Thin-walled Shear Beams, Structural Dynamics, instrumentation and avionics.	
CREDITS: 1.00	

AET 3303	Aircraft Structures
Principles of stressed skin structures. Aircraft structural materials and components. Airworthiness and airframe loads. Bending, shear and torsion of open and closed thin-walled beams. Structural idealization. Stress analysis of aircraft components.	
CREDITS: 3.00	

AET 3413	Applied Aerodynamics I
Basics of aerodynamics, the concept of lift and drag. Aerodynamic characteristics of airfoils: airfoil geometry parameters, vortex panel method, Kutta condition, thin-airfoil theory, high-lift airfoil section, Wings of finite span: lifting-line theory, trailing vortices and downwash, vortex-induced drag, vortex-lattice method, Effects of boundary layer interaction.	
CREDITS: 3.00	

AET 3423	Applied Aerodynamics II
Principles of compressible flow. One-dimensional gas dynamics, normal and oblique shock waves. Prandtl-Meyer flow, Mach lines and characteristics. Two-dimensional, supersonic flows over wings and airplane configuration.	
CREDITS: 3.00	

AET 3503	Fixed And Rotary Wing Assemblies
A general view of the various fixed and rotary wing aircraft components, control systems, landing gear, fuel systems, wheels, brakes, and rotor systems.	
CREDITS: 3.00	

AET 3513	Aircraft Design
Conceptual design of an airplane based on a set of requirements. Size and weight estimation. Design analysis based on the performance parameters. Sizing of cockpit, passengers' cabin, cargo compartment. Weapon carriage considerations, Conic shape lofting of fuselage and wings for design layout.	
CREDITS: 3.00	

AET 3603	Aircraft Dynamics and Stability
Static stability and control, airplane equations of motion, analysis of aerodynamic forces and moments, analysis of longitudinal and lateral dynamic stability.	
CREDITS: 3.00	

AET 4123	Aircraft Reliability and Maintenance Engineering
Introduction to reliability theory, Life testing, Maintained systems, Integrated logistic support (ILS), Aircraft handling, Repair station requirements, Quality systems, Inventory control, Structural repair, Engine maintenance and overhaul, Maintenance of aircraft systems and instruments.	
CREDITS: 3.00	

AET 4143	Human Factors
Understand the human behavior and performance when applied to aviation operations. Optimize the fit between people and the aeronautical systems in which they work in order to improve safety and performance. Gain a comprehensive overview of the effect and management of human factors in aviation.	
CREDITS: 3.00	

AET 4203	Composite Materials
Fiber reinforced composites and their properties. Stress, strain, and strength of composite laminate, Failure criterion, Environmental effect, Design of composite structure.	
CREDITS: 3.00	

AET 4213	Rotary Wing Aircraft
Aerodynamics of flight for rotary wing aircrafts. Two-dimensional aerodynamic characteristics of airfoils and their application in helicopter design. Aerodynamics of finite rotary wings. Theory of helicopter hovering and vertical flight including autorotation. Aerodynamic behavior of the rotor and the helicopter in forward flight.	

CREDITS: 3.00	
AET 4313	Manufacturing Processes
Introduction to rolling, drawing, machining, and joining (welding, soldering, adhesive bonding, and mechanical fastening), sheet-metal forming processes, and fabrication of composite materials, Introduction to heat treatment and plasma coating.	
CREDITS: 3.00	
AET 4323	Non Destructive Testing
To study and understand the various Non Destructive Evaluation and Testing methods, theory and their industrial applications. This course will demonstrate the difference between non-destructive testing and mechanical testing methods, testing techniques for surface, liquid dye penetration method, thermography, eddy current testing, ultrasonic testing, acoustic emission and radiography testing methodologies.	
CREDITS: 3.00	
AET 4433	Aircraft Propulsion
Understand and perform analysis on different aircraft propulsion systems. Topics include: turboprops, turbojets, turbofans, turbo shaft, ramjets, scramjets and rocket engines, beside intakes, compressors, fans, turbines and propelling nozzles.	
CREDITS: 3.00	
AET 4443	Computational Fluid Dynamics
Designed to introduce undergraduate engineering students to the fundamental concepts, techniques, methods, and algorithms used in Computational Fluid Dynamics (CFD). Students will learn to develop and implement numerical methods and related algorithms for numerical solution of flow and transport partial differential equations (PDE) models. The practical utility of the course will be demonstrated by the application of the theory to understand and perform flow simulations using a commercial CFD software.	
CREDITS: 3.00	
AET 4453	Aerospace Vehicles
Introduction to rocket propulsion systems, solid, liquid-bipropellant, and hybrid rocket engines. Fundamentals of orbital, and interplanetary flight. Other topics to be covered include structural constraints, propellant feed systems, turbo pumps, and combustion processes.	
CREDITS: 3.00	
AET 4503	Finite Element Analysis
The course addresses the issues relevant to the practice and use of FEA in industry. Introduces finite element Mathematical Modeling of Engineering Problems. Apply CAD software using FEM to a range of Engineering Problems.	
CREDITS: 3.00	
AET 4613	Avionics Systems
Aircraft instruments and sensors. Introduction to aeronautical navigation systems, Introduction to communication systems. Automatic flight control systems and actuators.	
CREDITS: 3.00	

AET 4863	Special Topics in Aeronautical Engineering
Presents a theoretical or practical topic proposed by the faculty beyond what is offered in existing courses.	
CREDITS: 3.00	
AET 4893	Directed Study
An investigation under faculty supervision beyond what is offered in existing courses.	
CREDITS: 3.00	
AET 4902	Capstone Design Project I
Capstone final year design project requires the formation of a team to propose, plan and design an engineering product. The student team is totally responsible for the completion of the project milestones and course objectives while working under the mentorship of a faculty or industry engineer. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation schedule, and estimated cost.	
CREDITS: 2.00	
AET 4912	Capstone Design Project II
The final year design project consisting of the implementation, evaluation, and analysis of an engineering design project carried forward from the previous semester. Though guided by faculty, the student team is primarily responsible for the completion of the project milestones and course objectives. The course requires the integration and application of technological, organizational, communication, and interpersonal skills by the student team. Accurate analysis, implementation, documentation, and presentation skills form the basis for assessment.	
CREDITS: 2.00	
AFT 4006	Aeroplane Ground School Training
Ground school training is designed to prepare the student to operate the training aircraft for flight and includes technical and operating details of training aircraft systems and flight line and safety procedures.	
CREDITS: 6.00	
AFT 4015	Aeroplane General Handling Ground School
Students are taught the specific details of airfield operating procedures, aircraft flight procedures and aircraft manoeuvre procedures for VFR conditions. All aspects of general handling are covered including take-off, landing, climbing, descending, turning, level flight, circuits, emergency recovery, and aerobatics.	
CREDITS: 5.00	
AFT 4025	Aeroplane General Handling Flying
Students practice general handling flight, applying all information and skills provided by previous courses. Students carry out airfield operating procedures, aircraft flight procedures and aircraft manoeuvre procedures for VFR conditions. All flight profiles for general handling are covered including take-off, landing, climbing, descending, turning, level flight, circuits, emergency recovery, and aerobatics.	
CREDITS: 5.00	

AFT 4101	Aeroplane Instrument Flying Ground School
Students are taught Instrument Flight Rules and instrument flight procedures for flight and navigation and will practice those procedures on a flight simulator.	
CREDITS: 1.00	
AFT 4112	Aeroplane Instrument Flying
Explains how civilian and military air-space is managed through structures and regulations for safety and security. Students will learn Rules of the Air, General Airspace Division and Classification, UAE ATC Organization, UAE Military Airspace, Aeronautical Documentation, Civil Control Techniques, Fighters in a Training Zone, Separation Norms, Picture Building Airspace, UAE AOC Divisions, Air Tasking Orders, Airspace Co-ordination, COMPLAN and SPINS, AP Mission Brief.	
CREDITS: 2.00	
AFT 4202	Aeroplane Navigation Flying Phase
Students apply navigational procedures and techniques to fly an aircraft in accordance with a navigational plan, using navigation maps, charts and navigation radio aids. Students practice visual navigation and radio aid navigation and also practice navigation specific emergencies.	
CREDITS: 2.00	
AFT 4212	Aeroplane Formation Flying Phase
Students apply operational and safety procedures to fly an aircraft in close formation in accordance with a formation flight plan and local procedures for formation flight. Students also practice formation specific emergencies.	
CREDITS: 2.00	
AFT 4221	Aeroplane Night Flying Phase
Students apply operational and safety procedures to fly an aircraft at night in accordance with a night flight plan and local procedures for night flying. Students also practice night specific emergencies.	
CREDITS: 1.00	
AHM 1203	Aviation Physics
The principles of physics support explanation on how an aircraft behaves in relation to using physics principles/laws. Physics laws affect all aircraft maintenance designs, and maintenance engineers use fundamental principles of physics relevant to aviation technology. Topics covered include: matter; statics; kinetics; dynamics; fluid dynamics; thermodynamics; optics; wave motion; and sound.	
CREDITS: 3.00	
AVS 1003	Aviation IT Systems
Students will review and practice using military and aviation IT systems and applications employed by the UAE Defence Force. The students will be provided with information about the structure of IT systems and then given specific details of the protocols for use of UAE Defence Force systems. Students will then practice the use of all the systems.	
CREDITS: 3.00	

AVS 1013	Aviation Electric and Magnetic Fundamentals
Provides education in the fundamental physics behind some of the key technologies found in aviation systems. The course primarily focuses on Electricity, Magnetism and the basics physics behind electrical systems. However, there is an additional small section on wave motion and thermodynamics.	
CREDITS: 3.00	
AVS 1023	Aviation Calculus
Presents the basic calculus concepts required for the student of aviation. Topics include differentiation and integration of algebraic functions; applications to velocity, acceleration, area curve sketching and computation of extreme values.	
CREDITS: 3.00	
AVS 2113	Meteorology I
This course is devoted to basic meteorological knowledge essential to understanding the effect of weather on flight. Student pilots study the structure of the atmosphere, temperature, pressure, wind, clouds, stability, air masses, fronts, thunderstorm, icing, turbulence, visibility and fog. The course also includes lab activities designed to reinforce the theoretical concepts	
CREDITS: 3.00	
AVS 2123	Principles of Flight
A study of principles of flight fundamentals and theory at the technical level. This course includes history of flight, major aircraft components, basics of aerodynamics, aerodynamic lift, drag, stalling and high speed aerodynamics.	
CREDITS: 3.00	
AVS 2133	Survival
Covers principles of survival in a hostile environment. All geography conditions are considered, with an emphasis on survival in UAE environments of desert and sea. The course details aviation survival equipment and cadets carry out wet dinghy drills.	
CREDITS: 3.00	
AVS 2143	Aircraft Systems and Components
Details the construct and systems of aircraft, examining aircraft structures, hydraulic systems, pneumatic systems, ice protection systems, air conditioning and pressurization systems, oxygen systems, fire protection systems, landing gear and fly-by-wire control systems.	
CREDITS: 3.00	
AVS 2153	Radar Systems
Designed to provide cadets with the basic concepts of the radar theory and the operating principles of the ground and airborne radar systems. The course provides students with information on classic and modern Radar technologies and calculations. The course then extends to discuss processing the signals provided by Radar to convert them into data and information, and then concludes by reviewing various types of Radar data displays.	
CREDITS: 3.00	

AVS 3003	Avionics
Introduction to the basic concepts, terminology, and theory of electronics and communication systems. Details of ground based and airborne avionic electronic systems, their technologies and use. Systems covering include communications, radio navigation aids and satellite navigation aids, electrical power, radar, guidance and control systems	
CREDITS: 3.00	

AVS 3013	Instruments
The instruments covered by this course are treated in general terms. This course deals with aircraft attitude and flight path instruments, aircraft systems' monitoring instruments and navigation and aircraft management instruments including glass cockpit and multi-function displays. The course also covers instruments for engine and other aircraft systems.	
CREDITS: 3.00	

AVS 3023	Aero Engines
Provides information on the construct and operation of aircraft propulsion systems. Areas of study include piston and gas turbine engines, fuel and engine systems, gearing systems, accessories and propellers and rotors. Detail is also provided of thrust augmentation and control systems including: thrust reversal, thrust vectoring and afterburner	
CREDITS: 3.00	

AVS 3033	Navigation
Students are shown how to prepare a navigation plan and carry out navigation in the air using maps and charts. Details of physical, time and geographic factors effecting navigation planning are provided and students are taught which maps or charts to select. Students prepare a medium level navigation plan using navigation instruments.	
CREDITS: 3.00	

AVS 3042	Meteorology II
Provides instruction on meteorological effects that represent hazards to air operations and reporting data specifically relevant to aircrew. Students are taught to interpret and use meteorological reports, charts and forecasts to prepare and plan for flight operations.	
CREDITS: 2.00	

AVS 3053	Electrical Systems
Introduction to the basic concepts, terminology, and theory of electricity, magnetism and electronics. Details of ground based and airborne avionic electronic systems, their technologies and use. Systems covering include communications, radio navigation aids and satellite navigation aids, electrical power, radar, guidance and control systems.	
CREDITS: 3.00	

AVS 3103	Airmanship
Covers basic Aviation Terminology, important Rules and Procedures, knowledge about Airport and Air Traffic Control System. This study improves cadets' sense of safe flying or 'Airmanship'. The students also visit Air Traffic Control Tower, Runway, Airport Lights, Navigation Aids and training aircraft.	
CREDITS: 3.00	

AVS 3113	Aviation Safety
Students are introduced to the requirements of safety at work for aviation and the concepts of a safety culture to reduce aviation risks and improve performance. Students are shown how to identify hazards to safety on aircraft and airfields and how to prepare safety briefings and safety reports. Students are shown how aircraft maintenance contributes towards safety.	
CREDITS: 3.00	

AVS 3123	Advanced Navigation
The course provides the students with advanced navigation techniques that can be used for airways, low-level and tactical navigation. Students are taught various techniques for managing the flight path so as to meet the navigation plans.	
CREDITS: 3.00	

AVS 3133	Aircraft Performance: Aeroplane
The focus of this course is on aerodynamic performance of aircraft powered by reciprocating, turboprop, or jet turbine engines. The course includes aircraft performance curves, straight and level performance, climbing performance, descending performance, turning, take-off and landing performance, spinning, stability and control, and weight and balance.	
CREDITS: 3.00	

AVS 3143	Human Factors
Students will examine the concepts behind human factors and their effect on human performance. The course demonstrates the importance of human factors and discusses its effects on safety, effectiveness and improvement of the aviation industry. The concepts of situational awareness, decision making and the effects of workload, fatigue, stress and physical fitness on human performance are covered. Students are introduced to the concepts and practices of Crew Resource Management.	
CREDITS: 3.00	

AVS 3153	Electronic Warfare Systems
Provides students with a general overview of the principles, concepts and general scope of Electronic Warfare. The types or categories of Electronic Warfare and details of systems used to carry out the categories are studied, to include Electronic Attack (Electronic Warfare Counter-measures) Electronic Protection Measures (Electronic Warfare Counter Counter-measures) and Electronic Warfare Support (Electronic Support Measures).	
CREDITS: 3.00	

AVS 3163	Principles of Flight: Helicopter
The focus of this course is a study of principles of flight specific to a rotary wing aircraft (helicopter). It builds upon the general aerodynamic information supplied in Principles of Flight by providing information on the aerodynamics of the rotating wing, the blades of the wing, and the usual aerodynamics of rotary wing forward moving flight and rotary wing hovering flight	
CREDITS: 3.00	

AVS 3173	Missile Systems
Provides students with details of how air and ground based Air Defence missiles are designed and used. The technical specifications of the equipment, the payload, armament, propulsion, guidance and control systems are reviewed. Students then determine which Missile assets to use to establish a defence against a given air defence threat.	
CREDITS: 3.00	

AVS 3193	Aviation Law
This course provides the student with a thorough grounding in the international and national legal aspects of aviation, covering air law, international agreements and policies, air navigation services and aerodrome configuration and management.	
CREDITS: 3.00	

AVS 4003	Aircraft Performance: Helicopter
The focus of this course is on aerodynamic performance of fixed wing and rotary aircraft, with the primary emphasis being on helicopter performance. The course includes aircraft performance curves, straight and level performance, climbing performance, descending performance, turning, take-off and landing performance, spinning, stability and control, and weight and balance.	
CREDITS: 3.00	

AVS 4012	Aviation Physiology
Provides students with the effects of flying on pilot's body, precautions and remedies for the physiological and psychological problems experienced by pilots. Hypoxia, hyperventilation, spatial disorientation, vision, physiology of ejection, effects of drugs alcohol and carbon monoxide on flying are included. Motion and decompression sickness, fatigue and effects of acceleration, description of the first-aid and good nutrition are also treated.	
CREDITS: 2.00	

AVS 4126	Project
Students will carry out a Research Project as a Capstone Project. They will propose a hypothesis on an aviation topic, news item or system and carry out research on the hypothesis. Students will deliver a presentation on the research and present a paper with details of their hypothesis and their conclusions drawn from their research.	
CREDITS: 6.00	

AVT 1003	Aviation Mathematics and Physics
Apply mathematical and physical concepts that are essential for engineers in the field of aircraft maintenance. Basics of the following topics are covered: arithmetic, algebra, geometry, matter, statics; kinetics; dynamics; fluid dynamics; thermodynamics; optics; wave motion and sound. At the end of this course participants will have the essentials of math and physics needed for basic aircraft maintenance courses.	
CREDITS: 3.00	

AVT 2103	DC Electrical Fundamentals
Examine the construction and use of electrical components used in aircraft DC electrical circuits and systems. Construct, operate and test DC circuits using a range of instruments, in accordance with relevant circuit diagrams in aircraft maintenance manuals. This course provides the essentials of DC electricity needed for further electrical courses.	
CREDITS: 3.00	

AVT 2113	AC Electrical Fundamentals and Electrical Machines
Analyze the behavior of electrical components in AC circuits. Examine the construction and use of electrical machines to move, control and provide power to aircraft systems. Construct, operate and test AC circuits using a range of tools and instruments, in accordance with relevant aircraft technical publications. The course enhances understanding of various aircraft electrical systems for operation and maintenance.	
CREDITS: 3.00	

AVT 2203	Workshop Practices and Safety
Learn aircraft and workshop safety according to aviation standards. Understand the required working practices and know the appropriate safe aviation operations. Special topics include precautions to take when working with electricity, gasses, especially oxygen, oils and chemicals. This class discusses instruction and remedial actions to be taken in the event of a fire or accident. Essentials of workshop knowledge including engineering drawings, fits and clearances, tool control, workshop equipment operation, workshop standards are all taught.	
CREDITS: 3.00	

AVT 2213	Aircraft Materials
Explore aircraft material properties and how these influence basic aircraft structural design and repair techniques. Topics taught in this course include ferrous and nonferrous materials, composites and non-metallic materials as well as hardness, tensile and fatigue testing and corrosion. At the end of this course participants know material handling and understand the reason for selection of materials and their properties.	
CREDITS: 3.00	

AVT 2223	Aircraft Hardware
Explore the basic components, fasteners, rivets, locking devices, pipes, unions, bearings, transmissions and control cables and how these influence basic design and maintenance. The course provides the rationale behind using special devices and tools. Learn about sheet metal and materials handling along with welding and brazing.	
CREDITS: 3.00	

AVT 2233	Maintenance Procedures and Abnormal Events
Learn maintenance procedures such as aircraft weight and balance, handling, jacking, storage, inspection, disassembly and repair techniques. Examine re-fueling, de-fueling, ground power requirements, safety procedures. Examine concepts on reliability theory and non-destructive testing as a result of abnormal events such as lightning strikes, heavy landings and flight turbulence. In this course participants realize the impacts of these abnormal events on maintenance, scheduling and operation.	
CREDITS: 3.00	

AVT 2243	Electrical Wiring Standards and Practices
Learn the electrical wiring and interconnect system (EWIS) of a modern aircraft. Examine cables, loom construction and interconnect ability, connector types, pins, plugs sockets, as well as current and voltage ratings. Discover the operation, function and use of avionic test equipment, along with soldering and inspection techniques. Participants experiment codes and parameters for constituent parts.	
CREDITS: 3.00	

AVT 2253	Workshop Practices and Safety for Avionics
Learn aircraft and workshop safety according to aviation standards. Understand the required working practices and know the appropriate safe aviation operations. Special topics include precautions to take when working with electricity, gasses, especially oxygen, oils and chemicals. This class discusses instruction and remedial actions to be taken in the event of a fire or accident. Essentials of workshop knowledge including engineering drawings, fits and clearances, tool control, workshop equipment operation, workshop standards are all taught.	
CREDITS: 3.00	

AVT 2263	Aircraft Materials for Avionics
Explore aircraft material properties and how these influence basic aircraft structural design and repair techniques. Topics taught in this course include ferrous and nonferrous materials, composites and non-metallic materials as well as hardness, tensile and fatigue testing and corrosion. At the end of this course participants know material handling and understand the reason for selection of materials and their properties.	
CREDITS: 3.00	

AVT 2273	Aircraft Hardware for Avionics
Develop an understanding of basic components, fasteners, rivets, locking devices, pipes, unions, bearings, transmissions and control cables and how these influence basic design and maintenance. The course provides the rationale behind using special devices and tools. Learn about sheet metal and materials handling along with soldering.	
CREDITS: 3.00	

AVT 2283	Maintenance Procedures and Abnormal Events for Avionics
Explore maintenance procedures such as aircraft weight and balance, handling, jacking, storage, inspection, disassembly and repair techniques. Learn about re-fuel, de-fuel, ground power requirements, safety procedures. Examine concepts on reliability theory and non-destructive testing as a result of abnormal events such as lightning strikes, heavy landings and flight turbulence. In this course participants realize the impacts of these abnormal events on maintenance, scheduling and operation.	
CREDITS: 3.00	

AVT 2293	Electrical Wiring Standards and Practices for Avionics
Learn the electrical wiring and interconnect system (EWIS) of a modern aircraft. Examine cables, loom construction and interconnect ability, connector types, pins, plugs sockets, as well as current and voltage ratings. Discover the operation, function and use of avionic test equipment, along with soldering and inspection techniques. Participants experiment codes and parameters for constituent parts.	
CREDITS: 3.00	

AVT 2303	Aircraft Fundamentals and Basic Aerodynamics
Learn the aircraft anatomy and study the theory of objects moving through the air; In effect, understanding physics of the atmosphere. Aerodynamics will examine the aircraft, the relative wind and supports an understanding of aircraft systems involved in lift, thrust, drag and weight coupled with the theory of flight and flight stability. The science of flight will form a major study and research project based on the application and fundamentals of the equation of flight. This course underpins courses taught later in the systems subjects.	
CREDITS: 3.00	

AVT 2806	Work Placement I for Aviation
Engage in practical work experience in an environment that develops skills and knowledge. Experience the activities in aviation maintenance, design industry, related aviation industry such as supply and logistics, test and calibration. This initial work placement may be in other engineering fields. Document journal entries explaining placement objectives and critique of the participant attitude, behavior and accomplishment.	
CREDITS: 6.00	

AVT 2902	Sophomore Design Project
Guide the student throughout the preliminary stages of the aircraft design based on given set of requirements. Learn basics of systems development, component design, modification and design improvement. The Sophomore Design Project is a course that requires the formation of a team to propose, plan and perform a preliminary aircraft design while working under the mentorship of a faculty or industry engineer. Student teams are evaluated on its ability to coordinate efforts to propose the aircraft design criteria, aircraft components, resources, implementation schedule, and estimated cost.	
CREDITS: 2.00	

AVT 3102	Semiconductor Fundamentals
Learn the fundamentals of semiconductors since all modern aircraft use electronics in various systems within the cockpit, engine and cabin environment. Gain a fundamental understanding of diodes, transistors, and printed circuit boards. At the end of this course Students will define, describe and analyze some aircraft electronic circuits and complete practical assignments using a range of tools, in accordance with relevant design parameters and test equipment.	
CREDITS: 2.00	

AVT 3103	Electronic Fundamentals
Explain the basic principles of electronics in all aircraft systems within the cockpit, engine and aircraft cabin environment. Study the fundamentals of electronic circuits including diodes, transistors, integrated circuits, printed circuit boards and servo mechanisms. Discuss material electron configuration and electrical properties. In this course participants will define, describe and analyze aircraft electronic circuits and will complete practical assignments using a range of tools and instruments in accordance with relevant design parameters and test procedures.	
CREDITS: 3.00	

AVT 3113	Digital Techniques Electronic Instrument Systems
Explore digital techniques and electronic instrument systems with reference to typical systems arrangement and aircraft cockpit layout. Participants learn essentials of electronic instrument systems, numbering systems, data conversion, data buses, logic circuits and basic computer structure. Discuss integration of circuits Electronic displays, software management and control. Practical activities include typical electronic-digital aircraft systems and the use of aircraft simulators to interrogate systems faults and functioning of cockpit systems.	
CREDITS: 3.00	

AVT 3123	Integrated Circuits and Servomechanisms
Learn the fundamentals of integrated circuits and servo mechanisms. Experience complete practical assignments using a range of tools, in accordance with relevant design parameters and test equipment. At the end of this course participants will define, describe and analyze aircraft electronic circuits and Servomechanisms.	
CREDITS: 3.00	

AVT 3133	Digital Techniques
Explore digital techniques relevant to electronic fundamentals. Participants learn about electronic instrument systems, numbering systems, integration of circuits, electronic displays and software management and control. Practical activities include the use and application of digital devices.	
CREDITS: 3.00	

AVT 3143	Electronic Instrument Systems
Examine electronic instrument systems, numbering systems, integration of circuits, displays and software management and control. Participants will carry out practical activities which include the use of aircraft simulators and systems to interrogate systems faults and functioning of cockpit systems.	
CREDITS: 3.00	

AVT 3203	Maintenance Practices Workshop
Examine maintenance practices in a theoretical and practical manner that are essential for engineers and technicians in the field of aircraft maintenance. Learn safety precautions; workshop practices; tools; test equipment; fits and clearances; riveting; maintenance procedures; and material handling. In this course students will also complete aircraft maintenance activities in mechanical-aircraft workshops using a range of tools, in accordance with relevant aircraft manuals.	
CREDITS: 3.00	

AVT 3403	Human Factors
Explore human factors principles that are essential for engineers in the field of aircraft maintenance. The course covers many relevant topics including: human performance and limitations; social psychology, factors affecting performance; physical environment, communication, human error and hazards in the workplace.	
CREDITS: 3.00	

AVT 3413	Aviation Legislation
Describes aviation legislation that is essential for technicians and engineers in the field of aircraft maintenance. This course provides an overview of the regulatory framework; certifying staff; approved maintenance organizations; commercial air transportation; aircraft certification; continuing airworthiness, and applicable national and international requirements. At the end of this course participants will know the essentials of the regulatory body's relevant rules and guidelines.	
CREDITS: 3.00	

AVT 3503	Aircraft Flight Control and Structures for Avionics
Learn basic aircraft structures, the theory of flight, and the primary pitch, roll, and yaw functions. Examine high lift devices along with boundary layer controls and the operations of trim tabs, servo tabs, and mass balance devices. Participants learn about how aircraft structure is affected by stresses and strains induced by flight controls and fail safe criteria. In this course, general protection and lighting strike mitigation are also examined.	
CREDITS: 3.00	

AVT 3513	Aircraft Instrument and Lighting for Avionics
Explore the fundamentals of instrumentation and glass cockpit concepts. Examine pitot static systems, altimeters, speed indicators, compasses, gyroscopic components and other control supporting systems. Learn the on-board maintenance and data monitoring systems along with state of the art interior, exterior and emergency lighting systems.	
CREDITS: 3.00	

AVT 3603	Propulsion
Learn engine fundamentals, engine performance and basic components, that are essential for gas turbine operation. Topics covered include: Inlet, compressors, combustion, turbines, engine parts, exhaust, and collective synchronization and operation. Parameters, limitations and performance are discussed. Related systems such as fuel, air, ignition and indications are also covered.	
CREDITS: 3.00	

AVT 3703	Gas Turbine Engine I
Learn engine fundamentals, engine performance, engine efficiencies and basic components that are essential for gas turbine operation. Examine engine Inlet, compressor, combustion, turbine, exhaust. Engine components and parts are also discussed including bearings, seals, valves and pipes. The course covers engine supporting systems such as fuel, air, lubrication, ignition and indication systems.	
CREDITS: 3.00	

AVT 3712	Gas Turbine Engine I Workshop
This instructor led workshop supports participants to complete supervised exercises on maintenance of aircraft gas turbine engines using a range of tools, in accordance with relevant aircraft manuals. Examine in details all requirements for engine maintenance according to aviation standards. Practice all learned relevant theory in a supervised controlled environment.	
CREDITS: 2.00	

AVT 3723	Gas Turbine Engine II
Examine in details turbo prop, turbo shaft, auxiliary power units (APU) and Powerplant installation. Learn engine subsystems including: reduction gears, engine-propeller controls, over-speed devices and coupling systems. Discuss auxiliary power units (APU): purpose, operation and subsystems. Gain knowledge of fire protection systems, engine storage procedures and engine preservation techniques	
CREDITS: 3.00	

AVT 3733	Propeller
Learn propellers and blade essentials: fundamentals, construction, operation, maintenance, storage and preservation. Examine parts installation, pitch control, synchronization, ice protection, components operation, and system integration. In this course students complete exercises on propellers maintenance using a range of tools and various scenarios in accordance with relevant aircraft manuals.	
CREDITS: 3.00	

AVT 3806	Work Placement II for Aviation
Gain relevant engineering experience in an actual working environment in order to provide an opportunity to develop and apply professional work ethics and practices. Transfer of engineering skills learned at college to the workplace is a major feature of this course.	
CREDITS: 6.00	

AVT 4503	Aircraft Flight Control and Structures
Study basic aircraft structures, the theory of flight, aerodynamics and flight controls. Learn basics of pitch, roll, yaw, high lift devices along with boundary layer controls and the operations of trim tabs, servo tabs and mass balance devices. Examine aircraft structure: construction, layout, integration and limitations. Participants learn about how aircraft structure is affected by stresses and strains induced by flight controls and fail safe criteria. In this course general protection and lighting strike mitigation are also examined.	
CREDITS: 3.00	

AVT 4513	Aircraft Conditioning and Oxygen
Study the essentials of air-conditioning, and cabin pressurization systems components such a zone controllers, outflow valves and warning systems/devices, which are closely coupled with the human requirement for oxygen storage and distribution at altitude. Discuss sources of air supply including engine bleed and ground cart. At the end of this course participants will understand conditioning, supply system, distribution system, pressurization system control and relevant safety and warning devices.	
CREDITS: 3.00	

AVT 4523	Aircraft Electrical Power
Study DC and AC aircraft electrical power including: batteries, generators, inverters, transformers and voltage regulators. Explore external ground power, distribution, regulation and circuit protection, which are integral to the safe operation of commercial aircraft. Students will gain a thorough analytical understanding of the various relevant fundamental concepts	
CREDITS: 3.00	

AVT 4532	Aircraft Systems Workshop
Experience a range of aircraft practical activities designed in accordance with aviation Standards. Know the systems interdependency and the aircraft redundancy systems to guarantee the safe conduct maintenance activities. At the end of this course participants are competent in the selection and use of correct tools, ground support equipment and test equipment.	
CREDITS: 2.00	

AVT 4543	Aircraft Avionics Systems for Mechanical
Study the integrated modular avionics and the integration of these systems with the flight deck and maintenance systems allowing monitoring and control of the total aircraft cabin and environment from an internal and external perspective. Learn monitoring and management of various aircraft systems including: electrical load, fuel system, pressure systems, avionic communication. This course also provides an overview of Auto Flight, Communications and Navigation systems.	
CREDITS: 3.00	

AVT 4553	Aircraft Fuel and Passenger Systems
Know details of the fuel system layout, supply options and distribution, indications, cautions and warnings and de-fueling/refueling. Examine Passenger services such as water and waste along with aircraft equipment and furnishings, cargo and cabin emergency equipment.	
CREDITS: 3.00	

AVT 4563	Aircraft Protection Systems
Study fire and smoke detection systems, warning systems and fire extinguishing systems. Learn about the various fire extinguishers including fixed and portable systems. The course includes exploring the various protection-system functional tests.	
CREDITS: 3.00	

AVT 4573	Aircraft Hydraulic and Landing Gear
Study the basic system components, distribution, network and safety of hydraulic systems and apply these fundamentals to an undercarriage system during extension and retraction. This course also explains systems of the wheels, brakes, anti-skid, steering and various relevant components.	
CREDITS: 3.00	

AVT 4583	Aircraft Instrument and Lighting
Explore the fundamentals of instrumentation and glass cockpit concepts. Examine pitot static systems, altimeters, speed indicators, compasses, gyroscopic components and other control supporting systems. Learn the on-board maintenance and data monitoring systems along with state of the art interior, exterior and emergency lighting systems.	
CREDITS: 3.00	

AVT 4602	Aircraft Conditioning and Oxygen for Avionics
Learn the fundamentals of Air-conditioning, and cabin pressurization systems components such a zone controllers, outflow valves and warning systems/devices, which are closely coupled with the human requirement for oxygen storage and distribution at altitude. Discuss sources of air supply including engine bleed and ground cart. At the end of this course participants will understand conditioning, supply system, distribution system, pressurization system control and relevant safety and warning devices.	
CREDITS: 2.00	

AVT 4613	Aircraft Radio and Navigation Systems
Learn principles of various communication and navigation systems including: VHF, HF, emergency locator transmitters, recorders, landing systems, Doppler systems and flight director systems. Explore the relationship between frequency, radio transmission waves and propagation. Study flight management systems and modern global positioning via GPS principles. The course covers the essential aspects of flight communication, navigation, management and safety related systems.	
CREDITS: 3.00	

AVT 4623	Aircraft Electrical Power for Avionics
Explore DC and AC aircraft electrical power including: batteries, generators and voltage regulators. Study ground power, distribution, regulation and circuit protection, which are integral to the safe operation of commercial aircraft. Students will gain a thorough analytical understanding of the various relevant fundamental concepts.	
CREDITS: 3.00	

AVT 4633	Avionics Systems
Explore fire and smoke detection systems, warning systems and fire extinguishing systems. Learn about the various fire extinguishers including fixed and portable systems. The course includes learning about the various protection-system functional tests.	
CREDITS: 3.00	
AVT 4643	Aircraft Fuel and Passenger Systems for Avionics
Learn the identification of the system layout, supply options and distribution, Indications, cautions and warnings and de-fueling / refueling. Also examine Passenger services such as water and waste along with aircraft equipment and furnishings, cargo and cabin emergency equipment.	
CREDITS: 3.00	
AVT 4653	Aircraft Radar Systems
Examine Aircraft Radar, Air traffic control systems (ATC, Mode S, TCAS, Radio Altimeter) and its associated principles of operation and precautions. Participants learn essentials of radars, radar system components, component locations and operation. Explain the importance of aircraft radar and safe operation.	
CREDITS: 3.00	
AVT 4663	Aircraft Protection Systems for Avionics
Explore fire and smoke detection systems, warning systems and fire extinguishing systems. Learn about the various fire extinguishers including fixed and portable systems. The course includes learning about the various protection-system and their functional tests.	
CREDITS: 3.00	
AVT 4673	Aircraft Hydraulic and Landing Gear for Avionics
Explore the basic system components, distribution, network and safety of hydraulic systems and apply these fundamentals to an undercarriage system during extension and retraction. This course also explains systems of the wheels, brakes, anti-skid, steering and various relevant components.	
CREDITS: 3.00	
AVT 4683	Aircraft Autoflight Systems
Learn essentials of automatic flight control including working principles and terminology. Explain the concepts of feedback and inner-outer loops. At the end of this course the student compares the interrelationship between the pilot inputs and the aircraft motion sensors feedback to control a flight path.	
CREDITS: 3.00	
AVT 4902	Capstone Design Project I
The Capstone Design Project I is a final year course that requires the formation of a team to propose, plan and design an engineering project related to aviation. Though guided under the mentorship of faculty or industry engineer, the student team is primarily responsible for the completion of project milestones and course objectives. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation schedule, and estimated cost.	
CREDITS: 2.00	

AVT 4911	Capstone Design Project II
The Capstone Design Project II course consists of the implementation, evaluation, and analysis of an engineering design project carried forward from the previous semester. Though guided by faculty, the student team is primarily responsible for the completion of the project milestones and course objectives. The course requires the integration and application of technological, organizational, communication, and interpersonal skills by the student team. Accurate analysis, implementation, documentation, and presentation skills form the basis for assessment.	
CREDITS: 1.00	

BIS 3003	Business Information Systems
Deals primarily with the application of technology based information systems in organizations, as tools for achieving operational efficiency and the creation of business value. It develops understanding of how information systems support development and management of products and services and the decision making process to achieve competitive advantage. The major parts of information systems and their interrelationships are evaluated to allow the effective utilization of the systems.	

BNA 2103	Business Applications Development using JAVA
This is an introductory course in business applications development. It covers fundamentals of object-oriented program development using top-down design; structured programming; debugging, testing and implementation; and elementary data structures. The Java programming language is used as the software tool to learn about the fundamentals of object oriented programming for business applications.	
CREDITS: 3.00	

BNA 3003	Systems Analysis
Traditional systems development life cycle (SDLC) and alternative methodologies are reviewed. Focus is on planning, specification of structured requirements, methods, techniques, and tools used to determine information requirements, and documentation. Systems design methods and implementation issues are also introduced.	
CREDITS: 3.00	

BNA 3103	Database Design and Implementation
Through case studies, readings, and hands-on experience this course facilitates an in-depth study of database design to underpin decision support systems and related knowledge-based technologies. Additional focus is on organizational decision-making and its data, information, and knowledge-based support systems.	
CREDITS: 3.00	

BNA 3113	Principles of Business Analytics
Focuses on business intelligence and analytics. As an introductory course it covers a broad range of technologies, applications, and processes for gathering, storing, accessing, and analyzing data to help users make better decisions. Covers database/data warehouse management, executive IS, business performance management, decision support systems, and others. Hands-on experience is provided through projects that use several leading-edge technologies and software.	
CREDITS: 3.00	

BNA 4023	Big Data and Advanced Data Mining
Deals with Big Data related issues and the types of Big Data based ecosystems that support advanced analytics work, including complex data mining processes. Big Data management frameworks such as Hadoop, with underpinning sub-systems such as Hue, Pig, Spark and Streaming are studied. The course looks at how advanced data mining systems can harness Big Data management tools for more effective performance, using ingestion, transference and compression operations. Additionally, new developments with Cloud based and in-memory Big Data analytic systems are discussed.	
CREDITS: 3.00	

BNA 4033	Data Visualisation Techniques and Tools
Teaches advanced techniques for communicating complex business analytics information, as a key element of modern data engineering. Visual, perceptive and cognitive issues relating to the use of data visualization systems is discussed. Additionally, the influence of visualization channel and messaging properties such as entropy, information rate and channel capacity is investigated. Frameworks for optimal selection and structured design of visualization pipeline elements are treated, as well as the design aspects of visualization schemes for supporting high-end business analytics.	
CREDITS: 3.00	

BNA 4103	Advanced Business Analytics
Teaches how to manage and analyze business data to gain competitive advantage. It includes case studies, projects, and real-world business problems to present students with opportunities to apply business analytics skills and to use business analytics software applications.	
CREDITS: 3.00	

BNA 4113	Applied Marketing Analytics and Reporting
Provides an in-depth treatment of contemporary business analytics tools and systems used to measure, analyze and report digital and non-digital marketing performance. The course looks at a range of open-source and proprietary analytic tools used in social and digital marketing schemes. Additionally, strategic issues pertaining to the use of high-end analytics for assessing marketing campaign efficacy is treated, coupled with frameworks for structured deployment of marketing analytics solutions, and marketing performance reporting.	
CREDITS: 3.00	

BNA 4123	Ethics and Security in Analytics
Provides an in-depth treatment of the diverse topics and problems with Security, Privacy and Ethics that may arise during and after the completion of an Analytics project. The course addresses the key tools and frameworks available to analysts to assess the security infrastructure in analytics and identify the potential for ethical issues that may arise for the business as a result of the analytics project work.	
CREDITS: 3.00	

BNA 4203	Business Analytics Research Project
This is a mainly independent study course that allows students to use the research skills from previous courses as a framework for a final industry-based research project for the Business Analytics major. The final research project encourages students to identify and address learning outcomes across the major.	
CREDITS: 3.00	

BUS 2903	Introduction to Logistics and Supply Chain Management
Examines fundamental concepts of Supply Chain Management (SCM) and Logistics that together underpin corporate strategies aimed at achieving business performance goals. Introduces logistics and SCM principles, processes and strategies from a managerial perspective, and examines them within a framework that requires cross-functional integration of key business processes within the firm and across the network of firms comprising the supply chain. Emphasis is on analysing supply chain issues and aligning logistics and SCM strategies with business performance goals.	
CREDITS: 3.00	

BUS 2913	Sustaining Cultural Identity through Tourism and Events
Provides insight into the Tourism and event Industries and the importance of maintaining cultural identity. Globalisation of tourism and events brings prosperity to the destination but a growing concern is how to maintain distinctiveness and uniqueness of the destination's cultural identity. Emphasises the need for destination visioning and strategic planning to enable the tourism and event industries to flourish while maintaining the integrity and sustainability of cultural heritage and traditions.	
CREDITS: 3.00	

BUS 2923	Introduction to Sustainable Property Development and Management
Provides students with a general introduction to the processes and professional activities involved in sustainable property development and management. Explores the career and entrepreneurship opportunities within this professional area. Includes general international principles of property appraisal; linkages to the general economy; the local development process; property marketing; property law; and aspects of property and facilities management.	
CREDITS: 3.00	

CDG 2303	Introduction to Graphic Design
Explores the elements and principles of both two and three dimensional design to equip students with the concepts, skills and competencies to become versatile practitioners in a wide range of media and professions. Focusing on colour theory, colour systems and typography, the course describes composition, rendering and production techniques using sketching and industry-standard software methods.	
CREDITS: 3.00	

CDG 3003	Graphics Studio
The focus of Studio Graphics is the praxis of methods and techniques garnered from across the design industry. The course provides a framework in which students can develop more critical application of ideas by effectively managing stages of the design process, from conceptual development to full digital production.	
CREDITS: 3.00	

CDG 3503	Typography I
Introduces essential aspects of typography such as letter-forms and page structures. Develops an understanding of the historical background, technical and aesthetic issues, and communicative abilities of typography through exploration and application of various design scenarios. Explores type solution and applies basic typography concepts to given situations.	
CREDITS: 3.00	

CDG 4003	New Trends in Graphic Design
Discuss new trends and disruptive technologies that have an impact on Graphic Design. Developing processes and techniques to evaluate new trends, acquiring new knowledge and skills required for the adaptation. Several case studies will be used based on current trends at the time when the course is offered.	
CREDITS: 3.00	

CDG 4013	Graphic Design Thinking for Innovation
Addressing four fundamental designing thinking questions and several tools to help in understanding design thinking as a problem solving approach. Discussing case studies different organizations that used design thinking to uncover compelling solutions. Building mindsets and foundations essential for graphic designers. Learn about the Human-Centered Design methodology and understand their real-world applications with focus on Graphic Design. Work on several graphic design thinking challenges and develop a design solution for real life challenge.	
CREDITS: 3.00	

CDG 4023	Design Illustration
Analyses the professional field of illustration to produce effective visual narratives. Applying a variety of media and formats, explores the functionality of illustration effectiveness for presentation and distribution. Developing a dialogue of drawing and illustration as part of the classroom experience to equip students with the concepts and skills to work effectively in creative industry.	
CREDITS: 3.00	

CDG 4033	Studio Graphics
The focus of Studio Graphics is the praxis of methods and techniques garnered from across the design industry. The course provides a framework in which students can develop more critical application of ideas by effectively managing stages of the design process, from conceptual development to full digital production.	
CREDITS: 3.00	

CDG 4503	Advanced Typography
Aims to develop students' understanding of typographic principles in the context of current practice. Students' ability to make aesthetic and technical choices will be honed through evaluation of procedural standards used by professionals. Experimenting with typographic convention will allow students to develop their own approach, as they explore relationships between technology, process, and the creative application of typography.	
CREDITS: 3.00	

CDG 4713	Packaging Design
Addresses the theory behind, and the studio investigation of, three-dimensional structures as they relate to the area of packaging, exhibition, advertising and environmental design. Through experiment with different materials while addressing client briefs, ensures design rationale addresses the target market. Develops skills by creating a package design for industry use.	
CREDITS: 3.00	

CDG 4723	Sustainable/Social Design
Explores how the designer's role in shaping the public narrative on sustainable/social issues, causes and other needs-based topics, is crucial in becoming an accomplished graphic designer. By analysing contemporary environmental, cultural and societal issues around the world that have an impact on daily lives, applies creative design processes that increase awareness, motivate, inspire or incite action from specific, or broad, audiences. Through critiques and feedback sessions, assess design effectiveness according to the requirements of the design brief.	
CREDITS: 3.00	

CDG 4806	Final Project - Graphic Design
Integrates all the skills, competencies and knowledge students have learned in Graphic Design to accomplish a project of industry standard. Brings together professional, creative and critical approaches to conceptualise, research, plan, develop, execute and evaluate an original and independent project, which will be subjected to peer and industry review.	
CREDITS: 6.00	

CHE 2113	Applied Chemistry
Demonstrates good understanding of gases and their behavior, thermochemistry, chemical equilibrium, solutions and their properties, and electrochemistry. Applies principles of chemistry to engineering and technology.	
CREDITS: 3.00	

CHE 2123	Analytical Chemistry
Demonstrates good understanding of fundamentals and develops a practical background of classical and analytical techniques in chemistry. Perform experiments on instruments as related to modern laboratory operation and applications to industrial settings.	
CREDITS: 3.00	

CHE 2133	Organic Chemistry
Develop knowledge in fundamental principles of organic chemistry such as nomenclature, structure and properties of organic molecules, isomerism, reactions and mechanisms. Synthesis of simple organic compounds, performing separation and purification experiments, and identifying compounds based on their functional groups.	
CREDITS: 3.00	

CHE 2202	Chemical Engineering Principles I
Develop an understanding of, and the necessary skills in, techniques of engineering calculations covering essential issues of chemical engineering principles and their applications in industry. CREDITS: 2.00	
CREDITS: 2.00	

CHE 2213	Chemical Engineering Principles II
Develops an understanding of fundamental chemical engineering principles and their applications. Material and energy balances for non-reactive and chemically reactive systems used in industrial processes are performed.	
CREDITS: 3.00	

CHE 2253	Materials and Corrosion
Provides an introduction to the properties and corrosion behavior of metals, alloys and non-metallic materials. Laboratory exercises assist to reinforce theoretical concepts. Corrosion topics include classification of corrosion types and related corrosion mechanisms.	
CREDITS: 3.00	

CHE 2413	Oil and Gas Processing Technologies
Explains the basics of oil and gas industry, main products, related production processes, use of natural gas, upstream processing of natural gas, and reforming of the components into alkenes. Emphasis is on types of feedstock's, reactions and uses of end products.	
CREDITS: 3.00	

CHE 2422	Petroleum Chemistry Testing
Introduces students to laboratory experiments of crude oil samples using standard methods. ASTM methods are used for the analysis of physical and chemical properties of petroleum, and to lesser extent to petroleum products.	
CREDITS: 2.00	

CHE 2453	Fluid Mechanics
Applies fluid mechanics principles of energy balance, determination of flow regimes, compressible flow, and fluid measurement mechanisms to solve real life problems. Demonstrates metering and pumping of fluids and relevant application to the chemical and petrochemical industries.	
CREDITS: 3.00	

CHE 2903	Sophomore Design Project
Sophomore project requires the formation of a team to propose, plan design and prototype an open ended project. The student team is totally responsible for the completion of the project milestones and course objectives while working under the mentorship of a faculty or industry engineer. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation and prototyping schedule, and estimated cost.	
CREDITS: 3.00	

CHE 3313	Chemical Engineering Thermodynamics
Describes thermodynamic properties of pure substances, properties and the equations-of-state of ideal and real gases to solve thermodynamic problems. Demonstrates a good command of understanding the laws of thermodynamics. Understanding Chemical Thermodynamics. Represents a typical thermodynamic cycle on a T-S diagram and calculating the performance of a steam power plant.	
CREDITS: 3.00	

CHE 3323	Mass Transfer
Covers mass transfer operations with their fundamental theories as related to industrial applications. Emphasis is made on equilibrium stage operations, diffusion, and gas absorption in packed towers, distillation and humidification. Laboratory exercises are performed to illustrate the theory covered in this course.	
CREDITS: 3.00	

CHE 3403	Chemical Heat Transfer
Covers heat transfer, one of the core subjects in chemical engineering. The principles of heat transfer in solids (heat conduction), forced and natural convection, and radiation are thoroughly covered. Emphasis is placed on problems solving techniques related to heat flow and heat exchangers design. A description of evaporators, furnaces, and boilers, is also included. A series of experiments are designed to reinforce the principles and develop skills for operating heat transfer equipment.	
CREDITS: 3.00	

CHE 3413	Unit Operation 1
Covers the fundamentals of separation processes used in chemical industries, such as filtration, evaporation, drying, liquid - liquid extraction and multi-component distillation.	
CREDITS: 3.00	

CHE 3513	Equipment and Plant Design
Provides knowledge of equipment design for chemical processes. The course covers the overall procedure of designing a chemical process for various unit operations. It introduces the students to the detailed procedures of equipment design found in most gas and petroleum plants. Special emphasis is also made on mechanical design of the selected equipment.	
CREDITS: 3.00	

CHE 3613	Chemical Reaction Engineering
Describing the kinetics of chemical reactions and the design and operation of elementary chemical reactors. Detailing the principles of the kinetics of homogeneous gas and liquid phase reactions and describe the complex kinetic concepts related to chain reactions, and heterogeneous catalysis.	
CREDITS: 3.00	

CHE 4293	Production Engineering (Offshore)
Demonstrate good understanding of gas-oil-water separation techniques and equipment. Student should be able to differentiate between onshore and offshore oil production facilities together with knowledge of Floating Production Storage and Offloading (FPSO) vessels and use of mooring systems.	
CREDITS: 3.00	

CHE 4403	Gas Processing
Designed to cover the fundamentals of the gas process operations in the petroleum industry. Students will gain an understanding of hydrocarbon exploration methods and the conditions required for the formation and accumulation of hydrocarbon reserves. An overview of gas processing from exploration up to final production and transportation as well as gas properties calculations is also included. The course focuses on the principles of NGL extraction, LPG fractionation and LNG production plus some design aspects of the major unit process operations.	
CREDITS: 3.00	

CHE 4413	Chemical Process HAZOP and Risk Analysis
Describing specific approaches and techniques which may be used to analyze, assess and manage hazards and risks in chemical process industries. Performing HAZOP and semi-quantitative studies for hazard identification and risk analysis. Discussing chemical process safety involving accident sequences, methods to eliminate sequence steps and using statistics to characterize accidents. Reinforcing the knowledge through case studies.	
CREDITS: 3.00	

CHE 4423	Optimisation and Application in Refinery
Introduces optimization principles and linear programming techniques, which serve as a general guide for problem solving in design and operation. It focuses on model development and applications to solve a wide range of process engineering problems using spreadsheet software (Excel or Mathcad). The course also introduces the use of commercial software, which is extensively used in the oil, gas and petrochemical industries.	
CREDITS: 3.00	

CHE 4433	Petroleum and Petrochemical Processing
Covers the essential processing operations in a refinery where crude oil is converted into lighter fuels. The properties of significant fuels such as motor gasoline, diesel, jet fuel and heating oils are covered. The production, chemistry and marketing aspects of some important petrochemicals are also covered. The course is supported by a number of laboratory experiments.	
CREDITS: 3.00	

CHE 4443	Industrial Water and Effluent Treatment
Provides to gain an understanding the water quality requirements for Industrial use and wastewater quality discharge regulatory norms. Provides an introduction to the specific unit operation and unit processes used in industrial water and wastewater treatment including scientific engineering principles on which they are based. Basic concepts of reduce, reuse, recycle of water and wastewater are included. Analytical skills are covered through laboratory analysis of water and wastewater samples. Reinforcing the knowledge through case studies.	
CREDITS: 3.00	

CHE 4613	Chemical Engineering Modelling and Simulation
Simulation of real chemical processes via harnessing the powerful features of chemical engineering packages being applied to modeling, simulation, optimization, sensitivity analysis, and design.	
CREDITS: 3.00	

CHE 4623	Chemical Process Control
Covers the theory and practical aspects of chemical process control including the development of outline control schemes and troubleshooting base on control related problems. Conventional control methods as well as computer process control are discussed and laboratory sessions will emphasize the basic principles. This course examines the role and importance of process control systems and the dynamic behavior of the process. Students will learn and apply the concept of P, PI and PIP controllers.	
CREDITS: 3.00	

CHE 4863	Special Topics in Chemical Engineering
Presents a theoretical or practical topic proposed by the faculty beyond what is offered in existing courses.	
CREDITS: 3.00	

CHE 4893	Directed Study
An investigation under faculty supervision beyond what is offered in existing courses.	
CREDITS: 3.00	

CHE 4902	Capstone Design Project I
Final year course requires the formation of a team to propose, plan and design an engineering project. The student team is totally responsible for the completion of the project milestones and course objectives while working under the mentorship of a faculty or industry engineer. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation schedule, and estimated cost.	
CREDITS: 2.00	

CHE 4912	Capstone Design Project II
Final year course consists of the implementation, evaluation, and analysis of an engineering design project carried forward from the previous semester. Though guided by faculty, the student team is primarily responsible for the completion of the project milestones and course objectives. The course requires the integration and application of technological, organizational, communication, and interpersonal skills by the student team. Accurate analysis, implementation, documentation, and presentation skills form the basis for assessment.	
CREDITS: 2.00	

CHM 1103	Engineering Chemistry
Covers the fundamental principles and concepts of chemistry, matter, atomic theory, atomic structure and periodic table, electronic configuration, chemical bonding, stoichiometry, chemical reactions and brief introduction to organic chemistry. Classroom concepts are supported by laboratory experiments.	
CREDITS: 3.00	

CIA 2503	Web Applications Development
Develop an understanding of Web Applications and their underlying technologies including the role of client-side and server-side scripts. Apply web design practices and methodologies used in creating interactive web-based user interfaces. Apply the concepts of user authentication, personalisation, data validation and persistence to functioning web applications with access to data stored on a server.	
CREDITS: 3.00	

CIA 2513	Key Components of IoT Architecture for Smart Applications
Introduces the IoT architecture and the concepts of smart cities. It provides an overview of the basic technologies required for supporting the IoT and how these technologies and devices are used in mobile apps to support smart cities. Learners will gain an understanding of the impact of the IoT on smart cities. The course provides students with the opportunity to develop a mobile application using the IoT devices. It also introduces typical application scenarios in which IoT provides innovative new services to enhance productivity and save costs.	
CREDITS: 3.00	

CIA 3003	Introduction to Mobile Applications
Examine various industry compliant user interfaces as applied to mobile apps. Learn how to pass data between pages and to use the local storage system. Create smart apps that use the location-based services. Design and develop apps that will be deployed to the actual device that is compatible with the technology.	
CREDITS: 3.00	

CIA 3103	Database Design and Administration
Apply data modelling, database design and database administration techniques on an RDBMS server. Learn how to use Structured Query Language (SQL) to define, manipulate, and administer data. Develop an understanding of the concept of database administration and define the duties and responsibilities of database administrators.	
CREDITS: 3.00	

CIA 3113	IoT and Security
Students understand unique vulnerabilities in IoT systems that are commonly exploited, discover best practices to integrate into product design processes to enhance product security level, examine emerging threats and learn to think like a 'hacker' to gain the skills necessary to create more secure IoT products, assess risk, integrate defensive tools for mitigating risk, and addressing future vulnerabilities throughout the product life cycle.	
CREDITS: 3.00	

CIA 3123	Mobile Game Development
Commencing with a comprehensive overview of the games development process including important historical perspectives, content creation strategies, production techniques, platforms, genres, character development and gameplay. Developing critical skills for designing and creating interactive online games, including developing a storyline, storyboarding, interface design, integrating audio and video, and ensuring the key game assets meet the specifications as required.	
CREDITS: 3.00	

CIA 3133	Advanced Application Development
Providing students with the knowledge and skills that are needed to understand how to develop software systems that work together in an efficient and productive manner. Concepts such as scalability, reliability, performance tuning, benchmarks, standardization, security, testing, and change control are addressed. The integration with APIs (Application Program Interface) is discussed and utilized with examples such as secured payments processing and social media applications.	
CREDITS: 3.00	

CIA 4003	Advanced Mobile Applications
Develop the knowledge and skills required to create mobile applications that connect to external data sources, control device hardware, use cloud storage and its services, and include multimedia content, graphics, and animation. Develop and deploy secured applications by implementing multi-level security and upload your apps to the relevant market place.	
CREDITS: 3.00	

CIA 4103	Data Driven Web Technologies
Examines how to validate user input on both client-side and server, handle exceptions and maintain application state. Learn how to interact with different data sources. Develop advanced skills in the CRUD operations through server-side codes. Implement security principles through user authentication, roles, and user authorization.	
CREDITS: 3.00	

CIA 4203	Enterprise Database Applications
Develop a comprehensive understanding of advanced topics pertinent to database management systems (DBMS) and study how they are being applied in a business environment. Examine the advanced concepts used to design, implement and administer database applications on client server configuration. Using different tools, develop forms and reports, control objects and codes for mitigation of data entry errors, and implement security measures.	
CREDITS: 3.00	

CIA 4503	Advanced Object Oriented Programming
Apply object oriented concepts in providing solutions for problems faced by software developers. Demonstrate ability to appropriately apply the concepts of abstract classes, inheritance, polymorphism, interfaces, method overloading, aggregation, compositions, and associations in developing object oriented code. Develop applications that include a database back-end component.	
CREDITS: 3.00	

CIA 4613	Mobile Application Administration
Develop an understanding of advanced client-side and server-side mobile application concepts. Create hybrid mobile applications using an appropriate mobile server. Examine modern UI frameworks such as jQuery mobile, DOJO mobile and Sencha Touch UI, and server-based authentication. Deploy the mobile application within an enterprise environment.	
CREDITS: 3.00	

CIB 2003	Technology Based Marketing
Examine the basic concepts and processes of effective marketing, focusing on current and emerging technology based marketing strategies, principles and concepts and how technology may impact upon the marketing process. Apply marketing mix strategies for products and services using technology enabled strategies.	
CREDITS: 3.00	

CIB 3003	Human Resource Management and Systems
Develop a comprehensive understanding of Human Resource Management theoretical and practical concepts from policies, procedures and activities to HR IT systems. Examine HR processes and systems, tools and contemporary developments and assess their impact on the success of organizations both locally and internationally	
CREDITS: 3.00	

CIB 3013	Data Analytics
<p>Communicating the value of data as a corporate asset to outline opportunities for cost savings and revenue generation. Applying data governance roles and responsibilities to assure data integration. Use metrics for quality of data managed in a technical solutions portfolio. Preparing data to be fit for purpose for analytics and business intelligence to ensure the analysis presented is the right data to the right person at the right time. Managing data to meet corporate security and classification standards.</p>	
CREDITS: 3.00	

CIB 3103	Object Oriented Analysis and Design
<p>Examine one practical, complete, object-oriented analysis and design (OOAD) road map from requirements gathering to system design. Develop the concepts and techniques necessary to effectively use system requirements captured in use cases to develop a robust design model using OO architecture, human computer interaction and data management designs</p>	
CREDITS: 3.00	

CIB 3113	Business Finance
<p>Provides students with financial and accounting concepts and the skills to integrate financial data with relevant information systems. It discusses financial and accounting concepts and issues that will contribute positively to the students ability to design integrated business solutions enabled by information technology.</p>	
CREDITS: 3.00	

CIB 3123	Big Data Technology
<p>Describing the Big Data landscape including examples of real world big data problems. Explaining the V's of Big Data and why each impacts data collection, monitoring, storage, analysis and reporting. Getting value out of Big Data by using a 5-step process to structure analysis. Identifying big data problems and recast big data problems as data science questions. Summarizing the features and value of core Hadoop stack components including the YARN resource and job management system, the HDFS file system and the MapReduce programming model.</p>	
CREDITS: 3.00	

CIB 3203	Accounting For Managers
<p>Introduces students to accounting as a system for gathering and reporting information, and to its role in business decision-making. It covers the major steps of the accounting cycle as it relates to the processing of financial transactions through an accounting information system in each accounting period. The students will learn accounting terminology and principles; prepare financial statements, operating budgets and financial budgets; and perform Cost-Volume-Profit analysis.</p>	
CREDITS: 3.00	

CIB 3303	E-Business Principles
<p>Discuss the evolution of e-Business. Develop a sophisticated understanding of e-business and evaluate its opportunities, limitations and impact on traditional businesses and institutions especially for UAE-based organizations. Evaluate current and emerging e-business strategies, technologies and related security, legal and ethical issues.</p>	
CREDITS: 3.00	

CIB 3403	Advanced Database Technologies
<p>Discuss advanced database technologies and business intelligence tools that help modern day enterprises store, access and analyse data essential in decision making. Focus on such database technologies as data warehousing, data mining, XML data and information retrieval. Assess the importance of data quality and such issues as integrity, consistency, concurrency and security.</p>	
CREDITS: 3.00	

CIB 4003	E-Business Applications Development
<p>Develop the skills required to build e-commerce applications. Develop server side applications that generate content, maintain state, authenticate users, connect to databases, and provide security of transactions and confidentiality of data. Build a complete e-commerce web application that handles memberships, online catalogues, shopping cart module, and check out.</p>	
CREDITS: 3.00	

CIB 4203	Customer Relationship Management Systems
<p>Use Customer Relationship Management (CRM) to support business processes and development. Examine how to utilise the information technology resources, strategies, software and processes needed to support an effective CRM strategy. Assess, in particular, CRM techniques, to enhance customer service, sales force effectiveness and marketing strategy. Evaluate the benefits of creating customer loyalty, developing market intelligence and embedding a customer relationship management system into an organisation.</p>	
CREDITS: 3.00	

CIB 4203	Customer Relationship Management Systems
<p>Use Customer Relationship Management (CRM) to support business processes and development. Examine how to utilise the information technology resources, strategies, software and processes needed to support an effective CRM strategy. Assess, in particular, CRM techniques, to enhance customer service, sales force effectiveness and marketing strategy. Evaluate the benefits of creating customer loyalty, developing market intelligence and embedding a customer relationship management system into an organisation.</p>	
CREDITS: 3.00	

CIB 4603	Enterprise Resource Planning
<p>Develop a sophisticated understanding of the concept of ERP systems and how business processes interact in an ERP system in areas of: Procurement, Materials Management, Production Planning and Execution, Sales Order Management, Financial Accounting and Controlling, and Enterprise Asset Management. Develop in-depth theoretical and practical knowledge regarding ERP through exercises and case studies.</p>	
CREDITS: 3.00	

CIM 2103	Storyboarding for Multimedia
<p>Build a visualisation to present an idea or plan prior to developing a linear or interactive multimedia application. Employ aspects of storyboard production including interpretation of concepts and scripts, layout and design and drawing for user interfaces. Implement interaction design using software skills for the production of digital visualisation techniques, movie and animation storyboarding including animatics and designing layout and interaction for game levels.</p>	
CREDITS: 3.00	

CIM 3003	2D Animation
<p>Discuss the history and types of 2D animation, and the theory behind the concept of animation, namely, the persistence of vision. Identify the basic principles of 2D animation. Create 2D animation in linear and interactive applications. Describe the concepts and mechanics of sound synchronisation, lip-synching and integration of sound to 2D animated sequences. Utilise professional animation tools and applications to develop 2D digital animation sequences that incorporate contemporary animation principles and techniques.</p>	
CREDITS: 3.00	

CIM 3113	Motion Graphics
<p>Building technical proficiency in the field of motion graphics by further developing skills in vector graphics, animation and video effects, and applying these skills to three well-established applications of Motion Graphics: Music Videos, Animated Infographics and Animated 3D Logos. Students will study Motion Graphics production pipelines from concept to execution and learn to work with shot descriptions, storyboards, 2D vector graphics video stock footage, 3D Graphics and video effects software.</p>	
CREDITS: 3.00	

CIM 3203	Programming for Multimedia
<p>Introduce programming as a creative tool for digital image and audio processes. Develop an understanding of object-based constructions and multimedia delivery requirements. Examine the concept of event-driven programming, and identify how it can be utilized to introduce interactivity and animation into a multimedia application. Discuss the use of GUI elements to enhance the interactivity of multimedia application and implement user interaction using various input devices. Develop multimedia programs with animation features for games or educational applications.</p>	
CREDITS: 3.00	

CIM 3403	3D Modelling and Animation
<p>Explain 3D modelling for 3D animation and develop an understanding of the basic structure of 3D modelling and virtual environment creation. Create scenes with 3D models of objects and characters, using different materials, surfaces, textures and shadings. Apply proper timing by using key-frames and the principles of animation to develop 3D animations. Animate complex objects utilising skeletons, rigging, constraints and kinematics. Apply appropriate lighting and proper camera type and attributes to render 3D animation.</p>	
CREDITS: 3.00	

CIM 3503	Computer Game Design and Development
<p>Examine the basic concepts and techniques of electronic game design and development. Explore the history of games and genres, level and model design, theory of Funativity, and game design and processes. Develop the skills required to build a basic computer game using scripting and programming including computer graphics, animation, and artificial intelligence.</p>	
CREDITS: 3.00	

CIM 4003	Multimedia Scripting
<p>Review advanced concepts of scripting for multimedia, and learn how to design and develop sophisticated multimedia products for education, entertainment and business through the use of advanced scripting and development tools. Apply the design process and various design components engaged in a typical interactive multimedia application or game. Develop an interactive multimedia application or game that uses scripting techniques for player interaction with other characters and objects in the game environment.</p>	
CREDITS: 3.00	

CIM 4103	Web Authoring and Administration
<p>Examine advanced knowledge and technologies needed to create, publish and manage professional-quality websites that meet the web guidelines and standards for HTML 5, CSS 3 and accessibility. Design and develop functional and a professional-level website for a given small business organisation. Integrate multimedia elements using HTML5, animation and industry accepted multimedia software packages. Employ graphics, audio, video, interactivity element for a web-based presentation using JavaScript, CSS styling, API and Custom Controls.</p>	
CREDITS: 3.00	

CIM 4203	Virtual Reality and Simulation
<p>Examine emerging electronic technology of Virtual Reality (VR). Learn key concepts needed to understand and evaluate VR systems, applications, simulators, and their impact on future digital systems and user interfaces. Discuss key simulation topics including stochastic modeling, random number generators, discrete-event simulation approaches, simulated data analysis, and simulation variance reduction techniques. Evaluate current VR technology systems. Produce an interactive simulation for a system that requires the use of prediction methods.</p>	
CREDITS: 3.00	

CIM 4303	VFX, Audio, Editing and Composition
<p>Discuss the entire production process including key production and post-production, digital film-making, compositing, editing, motion graphics, effects and computer graphics interface (CGI). Develop a critical understanding of the techniques and technology used to create high quality digital visual effects. Build the necessary skills required to work in post-production. create a rich portfolio of work that showcases student technical, artistic and team-working abilities.</p>	
CREDITS: 3.00	

CIN 2003	Enterprise Network Services
<p>Explore concepts and technologies behind domain based enterprise networks. Install, configure and administer an enterprise network operating system and configure protocols, services and server functions such as storage, backup and disaster recovery to the level required to effectively administer a secured domain based enterprise networks.</p>	
CREDITS: 3.00	

CIN 2103	Networking Fundamentals
<p>Exploring the OSI and TCP/IP layered models is fundamental to understanding how computing devices communicate with each other. Analyse the role the various protocols play in relation to physical and logical addressing, network types, end-to-end connectivity and application requirements and develop abilities to assess key factors in designing and building effective computer networks.</p>	
CREDITS: 3.00	

CIN 2203	Routing Protocols
Understanding of how routers learn about remote networks and find the best path for data packets to reach a final destination is essential to becoming a competent networking professional. Select and configure routing protocols and implement enterprise solutions such as Access Control Lists (ACLs) and Network Address Translation (NAT) to create secure network connectivity within organisations and to the public Internet.	
CREDITS: 3.00	

CIN 3003	LAN Switching
Discuss the features of a layer 2 and layer 3 switching, and learn how a switch interconnects and communicates with other switches and routers in networks. Build efficient, secure and reliable switched networks of varying size in response to business needs and apply effective troubleshooting techniques to ensure reliable communication between all devices on the network.	
CREDITS: 3.00	

CIN 3103	Wireless Networks
Learn the fundamentals of wireless communication including terminologies and behaviors associated with radio frequencies, components, standards and relevant organizations. Work in teams to perform case analysis, site surveys and measurement techniques to plan, design and implement secure wireless networks and evaluate their performance	
CREDITS: 3.00	

CIN 3203	WAN Technologies
Explore how Wide Area Network technologies such as PPP, Frame relay and Broadband technologies are used to connect networks over great distances and allow remote business branches to communicate securely. Critically evaluate case based scenarios and select appropriate procedures and technologies to design, build and troubleshoot enterprise network solutions in response to complex business needs spanning multiple locations	
CREDITS: 3.00	

CIN 3303	Network Security
Investigate the principles of network security including threat identification, risk analysis, risk management and risk avoidance. Configure network devices including routers and firewalls to prevent network attacks and to protect vital business assets. Analyse risk and assess vulnerabilities based on case scenarios and develop and implement policies, procedures and technologies to avoid potential threats, balancing business and security needs.	
CREDITS: 3.00	

CIN 3503	Virtualisation Technologies
Identify the key concepts of virtualising a classic data centre. Build a virtual infrastructure and manage resources in the virtual environment. Implement disaster recovery solutions to provide Business Continuity (BC) and Disaster Recovery (DR) for the virtual environment. Secure the virtual environment using industry best practices and maintain security for the virtual environment.	
CREDITS: 3.00	

CIN 4003	Routing Solutions for the Enterprise
Develop a critical understanding of design, configuration and implementation of exterior gateway protocols, remote connectivity and path control in enterprise networks. Explore route redistribution, path control branch and mobile connectivity. Apply the needed skills to design, implement and configure multiple routing protocols in a large network.	
CREDITS: 3.00	

CIN 4103	Network Management
Examine the fundamental concepts of network management, network management protocols, network management tools and implementation. Analyse and troubleshoot networks and examine various standards used for network management. Apply industry standards into practice and build a robust network operation and management plan for businesses.	
CREDITS: 3.00	

CIN 4113	Scalable Computer Network
Managing a scalable and highly available enterprise network. Understanding the role of link aggregation and first hop redundancy protocols to ensure that the enterprise has high speed switched network. Implementing network Layers Redundancy and availability in a switched network. Optimizing and troubleshooting interior routing protocols.	
CREDITS: 3.00	

CIN 4203	Voice over Internet Protocol (VoIP) Fundamentals
Focus on the VoIP network design, planning and implementation. Investigate the operation and troubleshooting of networks with integrated services for voice over IP (VoIP). Examine the role of Quality of Service (QoS), coding of voice and call setup in IP telephony networks.	
CREDITS: 3.00	

CIS 1003	Information Systems in Organisations and Society
Understanding the fundamental and changing role of information within organization and society. Exploring how information technology (IT) supports decision making. Enabling improvements in communication, quality, efficiency, and effectiveness. Investigating emerging technologies and the local and global impact of such technologies on individuals, organizations, and society.	
CREDITS: 3.00	

CIS 1103	Hardware and Networking
Introduces the fundamental computer systems hardware, architecture and various components. Provide a comprehensive understanding of modern computer systems, by covering variety of computer devices, and peripherals. Explore the various communication techniques based on the network layer model including application, transport, network and link layers. Develop an understanding of peer to peer networking, computer network security and computer network management.	
CREDITS: 3.00	

CIS 1203	Web Technologies
<p>Introduce the basic concepts of the World Wide Web and its underlying technologies. Define the functions of web browsers and web servers for accessing resources over the internet. Provide a comprehensive understanding of various multimedia components such as 2D graphics, 3D graphics, audio and video and integrate these components into website development. Create, test and publish a website, maintaining a range of webpages and sites using HTML, JavaScript, and CSS that integrate multimedia applications.</p>	
CREDITS: 3.00	

CIS 1303	Data and Information Management
<p>Examining relational database concepts and exploring simple database application development. Identifying organisational requirements, database design and implementation, and business application development. Developing practical skills in building database systems using different types of queries to retrieve and/or manipulate data, through customised forms and reports.</p>	
CREDITS: 3.00	

CIS 1403	Fundamentals of Programming
<p>Exploring the fundamental concepts and terminology of programming through logical thinking/problem solving. Designing and writing simple computer programs within an integrated development environment. Covering the concepts and techniques of variables, data types, sequence, selection, iteration, classes, objects, methods and the mechanics of running, testing and debugging programmes.</p>	
CREDITS: 3.00	

CIS 2003	Statistics and Probability
<p>Discussing the fundamental concepts of probability and statistics with an emphasis on their application in Information Technology. Developing skills in probabilistic and statistical intuition for application in the discipline. Exploring the elements of discrete probability, sampling and descriptive statistics, and application of statistics and probability in Information Technology.</p>	
CREDITS: 3.00	

CIS 2103	Principles of Information Assurance, Security and Privacy
<p>Describing the key concepts related to security and assurance of information assets. Exploring information risks, security frameworks and controls, and relevant legal, ethical, and professional issues. Discussing security-related activities, such as inspection and protection of information assets, detection of and reaction to threats, and examining pre- and post-incident procedures. Designing and implementing an information assurance plan to protect an organisations information.</p>	
CREDITS: 3.00	

CIS 2203	Applied Discrete Maths
<p>Introduce the functional computational aspects of a variety of data structures including sets, relations, discrete functions, graphs and trees. Engage with formal systems, including propositional and predicate logic, sequences, summations, and mathematical induction. Develop the capacity to read and construct valid proofs of the properties of algorithms.</p>	
CREDITS: 3.00	

CIS 2303	Systems Analysis and Design
<p>Describing established and evolving methodologies for the plan, analysis, design, and development of an information system using traditional and structured system analysis method. Identifying the systems development lifecycle phases, modelling tools and techniques, testing procedures and the need for systems evaluation.</p>	
CREDITS: 3.00	

CIS 2403	Object Oriented Programming
<p>Describing object oriented programming and its advanced characteristics. Exploring the object oriented programming paradigm; objects and classes; data abstraction and encapsulation; and exception handling, and the Collections Framework. Demonstrating the necessary skills to write, debug and implement programmes using OO terminology.</p>	
CREDITS: 3.00	

CIS 2806	Work Related Experience I
<p>This course is designed as a framework within which a range of work related learning activities can be accommodated to meet defined learning outcomes. It gives the flexibility, for example, for students to learn from work experience and to receive an understanding of business and technology and its real life operations (where possible in their chosen major topic) or to undertake an industry based project which meets the same outcomes.</p>	
CREDITS: 6.00	

CIS 2903	Operating Systems
<p>Introduces operating system concepts, architecture, platform and features. Topics include process synchronisation, interprocess communications, processor scheduling, memory management, virtual memory, I/O, and file systems. Open Source operating system will be used to perform installations, managing storage, managing files, administering users and group, installing and configuring local services.</p>	
CREDITS: 3.00	

CIS 3003	Human Computer Interaction
<p>Exploring the fundamental concepts of human-computer interaction. Developing skill in understanding usability and testing, user-centered design, human cognitive principles and models, information and interactivity structures, interaction styles and techniques. Applying dialogue method, response time and display rates, information presentation, interactive devices, information search and visualization and hypermedia to develop an interface of computer-based solutions.</p>	
CREDITS: 3.00	

CIS 3103	Project Management
<p>Developing an understanding of the basics of project management concepts and methods. Examining the project management framework, including key terminology, project management context, and project management processes. Demonstrating skills in managing budgets, schedules, and human/material resource allocations activities associated with project management quality, communications, risk and procurement.</p>	
CREDITS: 3.00	

CIS 3203	Enterprise Architecture
Develop advanced skills and knowledge about the foundational concepts of enterprise architecture and how it serves to integrate strategic, business, and technology planning methods to support enterprise-wide information technology resource development in the context of business requirements. Evaluate principles and best practices of enterprise architecture, and develop a comprehensive approach to articulating the subject matter involving real-world case studies.	
CREDITS: 3.00	

CIS 3303	System Architecture and Integration
Provides a comprehensive understanding of a number of system integration techniques that address specific requirements, including software and hardware acquisitions, integration issues and acceptance testing. Diagnose and troubleshoot systems interoperability and interface integration issues. Develop project plans that incorporate the influence of business processes and culture on system architecture decisions.	
CREDITS: 3.00	

CIS 3806	Work Related Experience II
Designed as a framework within which a range of work related learning activities can be accommodated to meet defined learning outcomes. It gives the flexibility, for example, for students to learn from work experience and to receive an understanding of business and technology and its real life operations (where possible in their chosen major topic) or to undertake an industry based project which meets the same outcomes.	
CREDITS: 6.00	

CIS 4203	Information Technology Strategy and Governance
Provides an understanding of IS Strategy and Governance, decision rights, strategic frameworks and mechanisms, alignment of strategy, governance and performance with related change management issues and schemes. The course highlights the fact that IS strategy and governance refers to allocation of responsibilities for the control of IS that enable accountability, participation, predictability and transparency. The course emphasises the responsibility of the board of directors and executive management in an organisation, and their integral role in enterprise governance.	
CREDITS: 3.00	

CIS 4403	Cloud Computing
Discuss classic data centres and how they can be migrated to a cloud solution. Examine cloud infrastructure solutions and build virtualised servers, desktops, applications and services. Implement a private cloud using the specification of a particular organisation.	
CREDITS: 3.00	

CIS 4603	Project Management
Developing an understanding of the basics of project management concepts and methods. Examining the project management framework, including key terminology, project management context, and project management processes. Demonstrating skills in managing budgets, schedules, and human/material resource allocations activities associated with project management quality, communications, risk and procurement.	
CREDITS: 3.00	

CIS 4906	Capstone Project (Integrative and Consultancy Focused)
Applying and integrating the knowledge of the development life cycle project management, development tools, and skills gained throughout the major to plan, analyse, design, and build a fully functional information system component to solve a business problem for organizations. Demonstrating an understanding of the skills in documenting and presenting the project to company representatives	
CREDITS: 6.00	

CMC 2303	Corporate Communication I
Explores the principles and concepts of corporate communication including key definitions, dynamics and the tools of corporate communication. By developing the skills needed to execute and analyse essential strategies or tools, helps students engage with various corporate stakeholders as well as overcome challenges in the contemporary corporate world.	
CREDITS: 3.00	

CMC 3003	Digital Marketing
Introduces students to the concepts of digital marketing enabling them to understand the fast changing world of digital marketing. Offers an overview of the role of digital marketing in the communication industry preparing students to create, communicate and track effectiveness of marketing messages. The course examines a variety of digital marketing channels focusing on current trends and best practices as per industry updates and standards.	
CREDITS: 3.00	

CMC 3503	Social Media
Social Media has played a critical role in changing the landscape of the corporate communication industry in the past few years. This course introduces students to different issues arising in the online communication field focusing on opportunities and challenges available to organizations. The course examines the evolution and practice of social media and how it is changing human interaction, brand positioning, and reputation management. Students use a variety of social media networks including Facebook, Twitter, LinkedIn, YouTube, Instagram, Pinterest, and Google+.	
CREDITS: 3.00	

CMC 4003	New Trends in Corporate Communication
Discuss new trends and disruptive technologies that have an impact on Corporate Communications. Developing processes and techniques to evaluate new trends, acquiring new knowledge and skills required for the adaptation. Several case studies will be used based on current trends at the time when the course is offered.	
CREDITS: 3.00	

CMC 4013	Effective Corporate Communications in a Globalised Workplace
Learning strategies on how to strengthen relationships with co-workers and other stakeholders from diverse cultural backgrounds, both inside and beyond the organization. Considerations of cultural values when employee communicates in a multicultural community and workplace. Discussing effective communication skills required to build relationships with colleagues. Adopting appropriate intrapersonal and interpersonal, verbal and nonverbal, communicative strategies to present information. Building personal profile and appropriately align self in a globalized workplace.	
CREDITS: 3.00	

CMC 4023	Media Relations
Prepares students to enhance their writing skills for the media and develop media relations management strategies in a corporate environment. Drawing on current media situations, this course aims to develop writing and distribution of messages in a variety of formats to multiple media channels and platforms. It also evaluates best media practices and principles in the industry and critically discusses the strategies that should be used to ensure the success of an event/PR campaign.	
CREDITS: 3.00	

CMC 4033	Corporate Communication II
Examines a variety of corporate communication functions such as crisis communication, investor relations, issues management and public affairs, media relations, internal communication and corporate social responsibility. Explores a variety of local, regional, and international case studies, discussing the complexities of the world of corporate communications. Develops skills to help write case studies on relevant corporate communication issues.	
CREDITS: 3.00	

CMC 4623	Communication Theory
Evaluates various communication theories and how they relate to society and culture. The emphasis is on the concepts, meanings, effects and impacts of diverse forms of communication within contemporary societies. The communication processes are explored within the context of contemporary professional practice, focusing on the nature of theory and research methods along with media content.	
CREDITS: 3.00	

CMC 4713	Media Law and Ethics
Introduces broader concepts of media laws and ethical issues in media professions including journalism, public relations, advertising and digital media. Focusing on media laws and ethics in the UAE, analyses past and developing cases to enhance students' understanding of the importance of the legal and ethical boundaries within which media professionals operate. Increases awareness about defamation and intellectual property rights, while evaluating ethical issues and moral values such as fairness, balance and bias.	
CREDITS: 3.00	

CMC 4803	Internal Communication Management
This course provides an in-depth look at the internal communication function inside organizations and its role in reputation management. The course explains the primary role of the IC function in creating employee engagement, the tools and vehicles used to communicate internal messages, and how to design these messages. It also offers a hands-on approach to learning IC audit, research, and planning.	
CREDITS: 3.00	

CMC 4806	Final Project - Corporate and Media Communication
Integrates all the skills, competencies and knowledge students have learned in Corporate and Media Communications to accomplish a project of industry standard. Brings together professional, creative and critical approaches to conceptualise, research, plan, develop, execute and evaluate an original and independent project, which will be subjected to peer and industry review.	
CREDITS: 6.00	

CMV 2003	Motion Graphics
Builds students' technical proficiency in the field of motion graphics by further developing skills in vector graphics, animation and video effects and by applying these skills to three well-established applications of Motion Graphics: Music Videos, Animated Info-graphics and Animated 3D Logos. Students will study Motion Graphics production pipelines from concept to execution and learn to work with shot descriptions, storyboards, 2D vector graphics video stock footage, 3D Graphics and video effects software.	
CREDITS: 3.00	

CMV 3003	Viral Video for Social Media
Discussing viral video for social media and broadcast markets. Researching the psychology and methodology behind creating clever viral videos. Discuss key benefits and challenges of Viral videos. Covers a comprehensive view of the types of viral videos and how you can use viral content to reach your target audience. Covering how to create a viral video for social media campaign, explore the power of viral video and develop the necessary skills to become a social media professional.	
CREDITS: 3.00	

CMV 3503	Editing
Introduces elementary post-production techniques and the history and theory of editing through critical analysis and discussion of selected examples. Using industry-standard software and tools, familiarises students with the hands-on editing exercises and assigned projects, skills and post-production techniques, including sound mix and colour grading.	
CREDITS: 3.00	

CMV 3513	Production Skills I
Introduces essential elements of professional video production with an emphasis on visual literacy, storyboarding, shot composition, framing and shot types. Applies the proper use of sound, appropriate selection of microphones and lighting equipment. Students create a video production (such as a P.S.A., information piece, or news item) and critique their own work and the work of others.	
CREDITS: 3.00	

CMV 4003	Film and Video Distribution and Marketing
Distribution, Marketing and Presentation introduces students to the skills necessary to support and enhance the student's artistic career in the film and video production industry. The subject focuses on presenting themselves and their short video works to the audience at large via a variety of distribution platforms, marketing and publicity strategies.	
CREDITS: 3.00	

CMV 4013	Screen Culture
Screen Culture will introduce basic approaches to the main canons and genres of cinema; the codes, conventions and narrative structures, from the silent era to contemporary cinema and film as art. Through exploring a diverse range of cinematic approaches and styles, the work of cinema innovators is highlighted. Students will develop their own vocabulary and cinema aesthetic to apply to their projects by reflecting critically on their own production work and the work of fellow students.	
CREDITS: 3.00	

CMV 4103	Production Skills II
Students extend video production skills with the introduction of additional creative concepts and technical skills. Working in small teams in different roles, learning new skill sets, including crew hierarchy, set procedures, budgets and realistic production schedules. The emphasis of the course is on enhancing technical and creative abilities in different phases of production. Students produce single camera productions working as a cohesive unit.	
CREDITS: 3.00	

CMV 4203	Video Scriptwriting
Students will examine the advantages and limitations of writing for the screen through lectures, group discussions and film screenings. Students undertake short writing exercises, learning how to write loglines, treatments and scripts using industry standard software for both narrative and documentary productions.	
CREDITS: 3.00	

CMV 4613	Short Video Production
Through a collaborative process, explores visual storytelling in narrative format at all stages of a video production - from concept to distribution of the finished project. The course initiates the creative processes of brain-storming, visual storytelling, guiding/directing actors, and choreographing the best possible shots and camera movements for visual conveyance of a story.	
CREDITS: 3.00	

CMV 4713	Documentary
Develops concepts and skills for producing, shooting, lighting, sound gathering and editing for documentary production. Enhances technical skills in operation of video equipment, set location lighting solutions, sound recording equipment and utilise editing systems to produce a cinematic documentary to convey emotion and meaning. Generates professional competencies by focusing on evaluation techniques to improve storytelling skills, creative decision-making, and creating proposals for funding a project needed to work as in the industry.	
CREDITS: 3.00	

CMV 4803	Advanced Edit and Effects
Explores creative possibilities for non-linear video editing, including aesthetics, composition (both music and sound design), titles design, compositing and special effects. Analyses different approaches to editing exploring impact on viewers. Integrates the theory of editing with hands-on experience by including a series of short practical components.	
CREDITS: 3.00	

CMV 4806	Final Project - Video Production
Integrates all the skills, competencies and knowledge students have learned in Video Production to accomplish a project of industry standard. Brings together professional, creative and critical approaches to conceptualise, research, plan, develop, execute and evaluate an original and independent project, which will be subjected to peer and industry review.	
CREDITS: 6.00	

COM 1003	Digital Storytelling
Provides hands-on experience to tell a story in digital format using basic techniques and tools. Applying audio, video and text in a simple narrative structure, students develop projects to familiarise themselves with the process of digital media production. Encourages to deconstruct and critically reflect on story, coherence and production value	
CREDITS: 3.00	

COM 1123	Introduction to Media Technology
Introduces students to industry standard tools, techniques and processes of various media technologies, in particular vector and raster graphics, 2d animation and interactive media. This course will provide a foundation for students to apply and develop their technical skills during their study program.	
CREDITS: 3.00	

COM 1143	Visual Communications
Introduces the language of visual communication and drawing to build knowledge of the elements and principles of design in the context of visual communication by examining the multiple ways in which they interact. The course aims at developing practical communication skills and proficiencies needed to enter the creative industries sector through drawing as a tool to translate broad concepts into visual images and to illustrate the elements and principles of design.	
CREDITS: 3.00	

COM 1153	Media Literacy
Introduces students to the historical and conceptual framework media literacy concepts and increases their functional literacy so that they can access, analyze, evaluate and create media messages of all kinds. The course provides the tools and skills that help to understand the role media plays in shaping, reflecting and, at times, manipulating social realities. The course offers insight into media production processes and encourages critical thinking, so that students can understand and navigate through complex media environment we live in.	
CREDITS: 3.00	

COM 1203	Photography
Develops conceptual and technical skills needed to function as a professional photographer working in a variety of media and platforms. Explores both analog and digital technology as students work in an experimental and critical environment to appreciate both historical developments and contemporary practice in commercial photography. Leads to the creation of a mini digital portfolio.	
CREDITS: 3.00	

COM 1223	History of Media and Design
Through research and practical projects, this course introduces major historical genres and movements in design and media, examining how art and design movements, styles and practices, continue to influence design and media today. The course reviews formal characteristics and principals of design movements and media. The course will help students develop their own language and critical examination of the practice of design and media.	
CREDITS: 3.00	

COM 2003	Convergent Journalism
Introduces students to the practice of journalism and helps them understand the role journalists play in reporting, processing and production of news, multi-platform news environment, and application of journalism. Covers the basic theories of mass communication as well as ethics and laws that are governing news reporting and editing. Explores the definitions, values and principles of news to create a broad understanding reporting, editing and presenting news.	
CREDITS: 3.00	

COM 2103	Creative Writing
Explores the basic elements of creative fiction and non-fiction writing, including characters, conflict, setting, narrative and dialogue as well as writing the news, press releases, copywriting, etc. Students will read a variety of works of fiction as well as texts on writing creatively. Students will develop vocabulary for talking about how fiction works and how to write creatively. Frequent writing exercises will give students the opportunity to practice and hone their creative writing skills.	
CREDITS: 3.00	

COM 2313	Project Management for Media
Provides the essential knowledge of project management principles, methods, tools and techniques used in media projects. Develops a broader understanding of what constitutes a project, and the role of a project manager in project set up, execution, control, analysis and reviews. Applying industry-standard tools and practices, media projects are simulated to provide authentic learning experience	
CREDITS: 3.00	

COM 3013	Interviewing and Presenting
Developing techniques to perform interviews for different media (TV, radio and newspaper). Selecting the appropriate people for their stories, preparing for the interviews, asking the right questions, and managing the interviews to stay focused on the main subject in the given time. Learning how to summarize the interview and their notes, editing the information and creating the final story in the appropriate media format.	
CREDITS: 3.00	

COM 3606	Work Placement I
Provides students with work experience in a professional work environment to develop their work ethics, habits and practices necessary for entering into employment. Under the mentorship of a work supervisor, students take different job roles to build competencies and skills in real work situations that enable them to put in practice the vocational skills learned at the college.	
CREDITS: 6.00	

COM 3616	Work Placement II
Provides students with work experience in a professional work environment to develop their work ethics, habits and practices necessary for entering into employment. Under the mentorship of a work supervisor, students take different job roles to build competencies and skills in real work situations that enable them to put in practice the vocational skills learned at the college.	
CREDITS: 6.00	

CSF 2113	Programming for Information Security
Developing the necessary coding skills for the Security and Forensics students to carry out security related tasks. Identifying building blocks of a specific scripting language to develop scripts that fulfil the requirements for automating tasks, finding weaknesses, exploiting vulnerabilities, and many other security and forensics related objectives.	
CREDITS: 3.00	

CSF 3003	Cyber Law and Ethics
Providing an insight into the laws and regulations of cyberspace, from a general understanding of the legal issues in e-commerce security and privacy, to the legal, managerial, and ethical issues affecting technology enabled organizations.	
CREDITS: 3.00	

CSF 3103	Incidence Response and Disaster Recovery
Developing two threads: Analyzing and responding to attacks, and recovering the system from attacks or disasters. Prioritizing attacks facing an organization using a weighted analysis table. Recovering from attacks, incidents and disasters by implementing a variety of tools. Identifying system vulnerabilities, taking appropriate countermeasures, developing an incident response and recovery plan and finally implementing a disaster recovery plan to minimize downtime.	
CREDITS: 3.00	

CSF 3203	Intrusion Detection and Ethical Hacking
Utilising intrusion detection techniques for the purpose defending and securing organisational information infrastructures. Identifying methods used in computer and network hacking in order to better protect systems from such intrusions. Describing the role of a penetration tester, including what an ethical hacker can and cannot do legally. Examining different types of malicious software. Implementing hacking and tools and techniques to determine potential system vulnerabilities. Reflecting on the purpose of defending organisational and information infra-structures.	
CREDITS: 3.00	

CSF 3403	Computer Forensics and Investigation
Analyzing various computer systems that have been compromised. Performing a systematic investigation, recovering critical data and aiding authorities in tracking those who caused the security breach. Analyzing and investigating digital evidence as related to UAE Cyber Law. Producing evidence for presentation in a UAE court of law. Analyzing crime incident reports using software and hardware computer forensics tools. Recovering digital data using forensics techniques. Developing a report of the breach.	
CREDITS: 3.00	

CSF 3603	Cryptography and Network Security
Introducing key concepts of encryption such as ciphers, symmetric and asymmetric encryption. Identifying system attacks and countermeasures. Recognizing the basic concepts of cryptography using various encryption techniques. Analyzing public key infrastructure, digital signatures and hash functions. Applying cryptosystems to user authentication, email, IP/web security and wired and wireless networks.	
CREDITS: 3.00	

CSF 4003	Security and Risk Management
<p>Recognizing Information Security from the perspective of Management. Discussing key information security management concepts and organisational roles for access, control, communication and business continuity management. Analysing methods of information security risk assessment, intellectual property protection, organisational structure assessment and modeling of critical infrastructure protection. Developing a contingency planning needed to deal with unexpected events. Implementing analytical tools for quantifying risk and the costs and benefits of various mitigation tools.</p>	
CREDITS: 3.00	

CSF 4103	Web Application and E-Commerce Security
<p>Discovering and exploiting security flaws and major vulnerabilities inherent in web applications. Applying various tools for mapping an e-commerce web application in order to identify its vulnerabilities. Identifying tools and techniques to secure vulnerabilities in client-side controls, authentication, session management, and access controls. Initiating injection attacks, and appropriate countermeasures to test and secure web applications such as online banking and e-commerce. Applying various defense mechanisms to secure web applications against possible attacks.</p>	
CREDITS: 3.00	

CSF 4203	Telecommunications and WAN Security
<p>Identifying different data communication and transmission techniques in telecommunication and WAN. Discussing TCP/IP and OSI protocol reference models and configuring circuit-switching and packet-switching technologies. Implementing various WAN protocols including Frame relay, ATM, MPLS and Wireless WAN. Designing and configuring WAN technologies and VPN for business data communications.</p>	
CREDITS: 3.00	

CSF 4613	Security Intelligence
<p>Express a more developed understanding of the anomalies and suspicious activities related to Information Technology. Exploring a deep visibility into network, user, application activity, and Security Information and Event Management. Consolidating security's relevant data from various sources to perform in-depth analysis, and to investigate threats and generate reports that meet compliance and standard regulatory schemes.</p>	
CREDITS: 3.00	

CVE 2001	Applied Drafting and CAD: Civil
<p>Develops skills to use CAD drafting as a means of communication in the civil and construction industry.</p>	
CREDITS: 1.00	

CVE 2013	CAD tools in Civil Engineering
<p>Apply drafting fundamentals to advanced applications of CAD in a civil engineering environment. Utilize cutting-edge technology to create CAD drawings for multiple aspects of the civil engineering construction industry. Manage multiple drawing files in a digital environment.</p>	
CREDITS: 3.00	

CVE 2103	Site Surveying
<p>Recognize the need for surveying in modern society particularly for civil engineering applications related to buildings, highways, utilities and any construction activity in the built environment. During this course, cutting-edge, state-of-the-art surveying equipment is used to perform a variety of surveying activities such as producing field notes, drawings, plots and calculations to meet industry standards.</p>	
CREDITS: 3.00	

CVE 2113	Quantity Surveying and Estimating
<p>Examines project cost measurement and monitoring relative to the client, the consultant, and the contractor. Emphasis is placed on the roles of the quantity surveyor and estimator with respect to estimation and measurement at all stages throughout the project. The course also examines the various constraints placed on the project in order to conform to the client's planned project expenditure, and the role of the contractor's project management team in estimating, monitoring and controlling costs, from the tender phase to completion.</p>	
CREDITS: 3.00	

CVE 2203	Engineering Mechanics
<p>Apply the concepts of equilibrium, learned in physics, to determine the forces acting on static engineering structures such as beams, columns, trusses and cantilevers. Illustrate these forces graphically. Calculate key structural properties related to centroids and moments of inertia that are required for structural analysis and design.</p>	
CREDITS: 3.00	

CVE 2213	Strength of Materials
<p>Utilize fundamental engineering mechanics principles and practices to determine shear force and bending moments in statically determinate structures. Assess the flexural behavior of structural members subjected to transverse loading. Apply key concepts in a hands-on, structures-related project.</p>	
CREDITS: 3.00	

CVE 2303	Soil Mechanics
<p>Discuss the origin and formation of rocks and soils and evaluate the basic physical properties of soils as a material for use in civil engineering applications. Determine the engineering properties of soils through international laboratory tests performed in a hands-on environment. Apply engineering principles in the analysis of the test results.</p>	
CREDITS: 3.00	

CVE 2403	Fluid Mechanics and Hydraulics
<p>Introducing basic concepts of fluid mechanics including fluid properties, hydrostatics, basic fluid flow, continuity and momentum equations, energy equations, laminar and turbulent flow and pressure losses. The course practical work will reinforce the theory through a set of experiments in the fluid dynamics laboratory.</p>	
CREDITS: 3.00	

CVE 2603	Construction Materials
Identify the principle characteristics of key construction materials including aggregates, Portland cement, concrete, asphalt, various metals, glass and wood. Prepare and perform tests using international standards on aggregate, concrete and asphalt samples in a hands-on environment in the civil engineering workshop and laboratories..	
CREDITS: 3.00	

CVE 2613	Civil Engineering Construction
Examine topics related to civil engineering construction covering above ground and below ground projects. Review the common types of formwork, steel and precast concrete frames and causes of deterioration in concrete structures. Reflect on local, regional and international building standards and practices.	
CREDITS: 3.00	

CVE 2903	Sophomore Design Project
Introduces the necessary tools and information to manage engineering projects and resources. It covers a range of principles and practices in initiating, planning, staffing, coordinating and completing a project within the triple constraint of schedule, budget, and performance. The course strives to strike a balance between the general knowledge of project management and available tools, such as Primavera, OpenProj, and Microsoft Project, to assist in managing real life projects.	
CREDITS: 3.00	

CVE 3203	Structural Analysis
Apply the principles of engineering mechanics and strength of materials to the analysis of determinate and indeterminate structures. Calculate forces on beams, frames and arches. Analyze a structure for deflection under regional and international codes.	
CREDITS: 3.00	

CVE 3303	Highway Engineering
Extend the core knowledge and principles of surveying to the design and construction of highways. Utilize regional and international geometric design parameters to highways for vertical and horizontal alignment, cross-sections, drawing preparation, drainage, and intersections at grade and interchanges. Emphasis is on design practices and construction procedures to achieve a highway with acceptable levels of performance in terms of safety, operation, economics and environmental concerns.	
CREDITS: 3.00	

CVE 3403	Water Resources and Supply
Hydrologic concepts, development of water supply sources, principals involved in the collection and transportation of water/wastewater/storm runoff, and distribution of water for municipal use. Best practices regarding water system management are discussed at length. Principles of hydraulics and knowledge of the water cycle and precipitation hydrology, design of water supply systems to international standards. Students also perform site visits to relevant sites to fully comprehend the importance of water supply engineering to the development and growth of world-class, large cities.	
CREDITS: 3.00	

CVE 3503	Foundation Engineering
Extend the core knowledge and understanding of soil mechanics to the analysis and design of geotechnical engineering systems. Differentiate between shallow and deep foundations and their use in local, regional and international settings. Explore alternatives for retaining structures and related stability of soils in civil engineering applications such as excavations, road embankments and earth dams.	
CREDITS: 3.00	

CVE 3513	Concrete Design I
Introduces the student to the properties and design principles of reinforced concrete structural elements. Introduces the Limit State Design Theory and applies the principles and skills gained in structural analysis to the design of reinforced concrete structural elements. The Euro/British Codes of Practice are the basic codes of reference for all the design and detailing work in this course. The course includes the properties of structural concrete and the influence of each of its constituents on the performance of the final product.	
CREDITS: 3.00	

CVE 4303	Traffic Engineering
Addresses the factors that influence the design, use and maintenance of roads with respect to traffic issues inclusive of local, international highway classifications and administration, traffic survey studies, economic and environmental considerations, driver, pedestrian and vehicle characteristics, roadway capacity, volume and flow characteristics, signalization of intersections, safety as well as modelling and computer simulation.	
CREDITS: 3.00	

CVE 4313	Urban Transportation
Introduces the subject of transportation planning process from a broader perspective. Covers history of development of transportation infrastructure in the UAE, factors affecting regional planning and local planning of transportation projects. Review evaluation and prioritization methods employed in urban transportation planning. Asset management of transportation related infrastructure and safety considerations in urban transportation planning. Integration of freight into transportation planning process. Relevance of sustainability in existing and future transportation related projects.	
CREDITS: 3.00	

CVE 4323	Transportation Planning
Investigate the processes involved in facilitating the planning for future transportation facilities. Determine the factors to be considered in the planning of new transportation projects including traffic flow, safety, energy consumption, travel time, accessibility, socio-economic and environmental impacts. Create local responses to sustainability and ethical issues.	
CREDITS: 3.00	

CVE 4333	GIS Applications in Civil Engineering
Define the basic concepts and types of Geographic Information Systems (GIS) used in civil engineering practice. Collect and analyze data, and perform selected spatial operations. Recognize the five main components and functions of a GIS while differentiating between vector and raster methods for data capture. Students will be introduced to various GIS applications in civil engineering using appropriate software.	
CREDITS: 3.00	

CVE 4343	Bridge Engineering
<p>Introduce the design of new bridges and evaluation of existing bridges in accordance with current AASHTO specifications. Discuss the procedures and requirements of bridge design and evaluation. Explain the AASHTO code provisions used for bridge design through examples. Outline the history of bridge engineering. Explain methods and procedures for superstructure and substructure design and evaluation. Introduce bridge load rating methods. Outline advanced methods and technologies for bridge condition assessment with case studies.</p>	
CREDITS: 3.00	

CVE 4353	Road Design and Construction
<p>Analyze pavement types and the factors that impact their design with emphasis on equipment, materials and practices. Discuss the construction of flexible and rigid pavements. Maintenance methods including evaluation and rehabilitation are addressed. Explore the environmental impacts of construction and maintenance topics to sustainability, ethics and quality issues.</p>	
CREDITS: 3.00	

CVE 4403	Waste Water Engineering
<p>Utilizing the principles of hydraulics and a knowledge of the water cycle and precipitation hydrology, design sewer systems to international standards. Perform site visits to relevant sites to fully comprehend the importance of waste water engineering to the development and growth of world-class, large cities like Abu Dhabi and Dubai.</p>	
CREDITS: 3.00	

CVE 4413	Environmental Engineering
<p>Apply the fundamental principles of science and engineering toward environmental engineering situations, recognizing it is as an interdisciplinary science. Analyze the naturally occurring environmental phenomena, industry and human induced compounds and micro-organisms, and the changes and imbalances that occur in the environment. Explore sustainability, ethics and quality of life issues.</p>	
CREDITS: 3.00	

CVE 4423	Solid Waste Management
<p>Examine the different sources of solid waste management. Investigate the important aspects of waste control legislation. Waste reduction programs and waste recycling are investigated and strategies developed for sustainability and to protect the local and global environment. Appraise local and international approaches to handling and disposal of hazardous waste, and quality assurance measures.</p>	
CREDITS: 3.00	

CVE 4433	Sustainability in Civil Engineering
<p>Introduces the concept of sustainability, emphasizes current practices and standards and simply addresses new concerns and constraints of building and construction. This new holistic approach requires some new ways of thinking and the frameworks for this are discussed. Students will be given the tools needed to understand this, a review of current practices for improving performance across the civil and environmental fields. These include water planning and treatment, building design and construction, community design and construction and more.</p>	
CREDITS: 3.00	

CVE 4443	Coastal Engineering
<p>Covers modern technology for civil engineering projects in a marine environment. The significant development along the shores of the UAE including the creation of coastline provide the backdrop for the course. Coastal climates, tides, waves and environmental issues are addressed. Construction techniques and structures including piles, break-walls, piers and off-shore facilities are part of the course. Computer modelling and relevant site visits round out the students learning experience.</p>	
CREDITS: 3.00	

CVE 4453	Environmental Regulatory Compliance and Public Policy
<p>Gives students a working knowledge of major environmental laws and the environmental impact assessment and permitting process. Key federal environmental statutes will be covered as well as the responsibilities of key regulatory agencies involved in environmental compliance. Local regulatory environment will be compared to global ones. In addition, the course emphasizes how to use critical thinking skills to analyze consequences of a planned action and determine impacts of changes in the environment, as compared with knowing the specifics of a particular regulation.</p>	
CREDITS: 3.00	

CVE 4463	Green Buildings
<p>Depletion of the earth's natural resources, soaring energy costs, pollution of vital water and food sources, irreversible environmental degradation and climate change are serious challenges facing the human civilization. Use engineering principles to develop innovative strategies to positively influence the human life, the environment, and productivity of engineering infrastructure. Understanding the principles of design and construction of green structures. Design various components of green buildings and evaluate the building performance according to LEED standards.</p>	
CREDITS: 3.00	

CVE 4503	Steel Design
<p>Determine wind loads on portal frames. Given a floor-framing plan, analyze and design a simple beam with its compression flange fully restrained/unrestrained laterally. Design tension and compression members in roof trusses. Design columns subjected to pure compression and combined flexural and axial forces. Design welded and bolted connections and a base plate connection. Analyze and design a one-bay/two-bay braced and moment frames for gravity and lateral loads using software.</p>	
CREDITS: 3.00	

CVE 4513	Concrete Design II
<p>Understanding of typical design procedures, construction methods and detailing of reinforced concrete elements and structures as a whole. The course will cover basic design procedures and detailing of footings, pile foundations, walls, shear walls, columns, beams, and slabs for reinforced concrete buildings.</p>	
CREDITS: 3.00	

CVE 4523	Steel Design II
Design of connections for structural elements like a beam splice, column splice and connections for moment and braced frames. Analyze and design a continuous beam of four spans with its compression flange fully restrained laterally. Design of members subjected to combined flexural and axial forces. Analyze and design two storey, three bay, braced and moment frames for gravity and lateral loads. Complete design of small industrial building for gravity and lateral loads. Explore the design parameters of steel bridges.	
CREDITS: 3.00	

CVE 4533	Prestressed Concrete Design
Covers the basic principles of pre-stressed concrete design and builds this to An ability to calculate, design and detail simple precast elements such as beams and slabs. The student will be able to complete both strength and serviceability checks and make appropriate allowances for fabrication and construction issues such as jacking techniques and joint details.	
CREDITS: 3.00	

CVE 4603	Construction Contract Management
Apply the principles and procedures involved in effective administration and management of engineering contracts, from tender to final completion. Explore the legal implications of contract documents; major issues in pricing and bidding; preparation of tenders and work breakdown for bidding; reading tender documents and estimating the cost of work; initiating, negotiating and signing agreements; coordinating with General Services as per UAE procedures.	
CREDITS: 3.00	

CVE 4613	Concrete Technology
Builds on the concrete-related topics introduced in the Construction Materials course. Emphasis in this course is on the quality assurance and quality control of Portland cement concrete. Topics addressed include Portland cement characteristics and related tests, testing of fresh and hardened PCC, an overview related to formwork, placement and curing of PCC, and finally a look at reinforcement used in PCC elements. A significant portion of the course learning time will be spent in the laboratory/workshop in testing activities using local and international standards.	
CREDITS: 3.00	

CVE 4803	Special Topics in Civil Engineering
Presents a theoretical or practical topic proposed by the faculty beyond what is offered in existing courses.	
CREDITS: 3.00	

CVE 4893	Directed Study
An investigation under faculty supervision beyond what is offered in existing courses.	
CREDITS: 3.00	

CVE 4902	Capstone Design Project I
Capstone final year design project requires the formation of a team to propose, plan and design an engineering product. The student team is totally responsible for the completion of the project milestones and course objectives while working under the mentorship of a faculty or industry engineer. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation schedule, and estimated cost.	
CREDITS: 2.00	

CVE 4912	Capstone Design Project II
Continuation of the capstone final year design project consisting of the implementation, evaluation, and analysis of an engineering design project carried forward from the previous semester. Though guided by faculty, the student team is primarily responsible for the completion of the project milestones and course objectives. The course requires the integration and application of technological, organizational, communication, and interpersonal skills by the student team. Accurate analysis, implementation, documentation, and presentation skills form the basis for assessment.	
CREDITS: 2.00	

ECE 2003	Teaching Mathematics in the Early Years: Skills and Concept Acquisition
Develop early mathematical skills and concepts collectively known as problem solving, reasoning and numeracy, subdivided into the areas of numbers as labels and for counting, calculating and shape, space and measures. Identify contemporary thinking about pedagogy and current practice in mathematics teaching in early childhood settings with a particular emphasis on the provision of developmentally appropriate, play-based learning experiences.	
CREDITS: 3.00	

ECE 2203	Learning through the Visual Arts
Identify recent thinking about creativity, and its promotion through visual arts based on UKEYFS and Reggio Emilia to affirm child-centredness. Develop skills, techniques and reflection by examining effective interventions to promote creativity and enable children to express knowledge, thoughts and feelings. Recognise opportunities to understand own creativity. Assist young children to comprehend their visual world.	
CREDITS: 3.00	

ECE 2503	Theories of Teaching and Learning that impact the Preschool Curriculum
Identify key philosophies and theories in early childhood education. For example: Froebel, Montessori, Dewey, Steiner Waldorf and Reggio Emilia. Discuss the impact of these on the different curricula in early childhood education. Revisit Piaget, Bruner and Vygotsky, and then critique the preschool curriculum of the UAE.	
CREDITS: 3.00	

ECE 2603	Learning through the Performing Arts
Identifies the importance of performing arts in the early childhood curriculum such as (drama/role play, dance, music, and movement). Students are able to explore and implement a range of the UAE methodologies in early childhood along with being expose to other international curriculums.	
CREDITS: 3.00	

ECE 3003	Literacies in Early Childhood
Identify a range of current approaches that facilitate the development of language and literacy skills including what are currently termed the new literacies, digital literacies or multi-literacies including digital text, images, hyperlinks and their arrangement on the page (Lankshear and Knobel, 2003). Identify processes by which children interact with a range of multiple sign systems that represent meaning in soft texts.	
CREDITS: 3.00	

ECE 3203	Learning through Literature
Examine how books, poems and a range of other texts can be used to develop learning across domains with a particular emphasis on early childhood literacy. Examine 4 aspects: the historical and contemporary influence of popular culture on the development of early childhood literacy practices; the role of literature to support learning across domains; selecting and exploiting appropriate texts/ genres for young learners (with reference to UAE and cross culturally relevant content); and establishing print/literacy-rich environments with a range of texts for various purposes.	
CREDITS: 3.00	

ECE 3503	Planning and Assessment in Early Childhood Education
Review the factors, including developmental levels, individual learning needs and programme aims, that need to be considered in planning for learning across both domains (cognitive, physical, social and emotional) and curriculum areas. Define the terms 'curriculum', (for example the UK EYFS), and 'syllabus', (for example the seven developmental areas), examining the relationship between the two.	
CREDITS: 3.00	

ECE 3703	Building Learning Communities in Early Childhood Education
Recognise family as the child's first teacher, foundation, and framework for the transmission of culture, language, attitudes and values. Analyse the stages of the family life cycle, interpersonal relationships within and outside the family and also identify the impact of context and culture on the family's ability to function effectively as an institution.	
CREDITS: 3.00	

ECO 1003	Microeconomics
This is an introductory microeconomics course that aims at teaching the fundamentals of microeconomics. It introduces supply and demand model and determinants of equilibrium in a market economy. Next, it provides a framework to analyze of consumer behavior and consumer decisions, as well as firms' decision about optimal production and the impact of different market structures on firms' behavior. The last part of the course will explore the use of microeconomic theory tools to analyze policy questions relevant to the operation of real economy.	
CREDITS: 3.00	

ECO 1103	Macroeconomics
Introduces the basic concepts and tools of macroeconomic analysis. Demonstrates the measurement of key concerns in macroeconomics: GDP; unemployment; and the price level. Provides analytical models for exploring economic performance and long run growth. Analyses the nature of business cycles and fiscal and monetary policies	
CREDITS: 3.00	

EDT 2003	Technologies for Learning I
Identify current educational theory and practice about learning technologies, and how they can be used to enhance teaching and learning in schools, tertiary institutions and other learning environments such as the workplace.	
CREDITS: 3.00	

EDT 2203	Information, Communication and Media Studies
Explore key components of media literacy which is an essential component of global citizenship in today's mediated world. Analyse the impact of the media on people's lives and how the media can serve as a highly motivating resource for teaching. Research a topic related to media and education, demonstrating an understanding of the issues.	
CREDITS: 3.00	

EDT 2503	Technologies for Learning II
Explore, build on and extend knowledge, skills and understanding of current educational theory and practice related to computer-based learning technologies that were introduced and developed in Technologies for Learning I. Apply knowledge to the teaching and learning environment through the delivery of a learning activity.	
CREDITS: 3.00	

EDT 2703	Distance and Online Education
Develop a sophisticated understanding of current educational theory and practice related to learning technologies in distance and online education. Explore and develop practical applications of distance and online education technology tools. Explore and debate current issues in distance and online education.	
CREDITS: 3.00	

EDT 3003	Computer Platforms
Explore the basics of network operating systems, network operating system components, operating system installation, and device drivers and configuration. Develop knowledge of how to install and configure an operating system in a work group and domain environment. Develop an understanding of the basics of desktop, laptop, mobile and network hardware, system administration, resource permissions, and become familiar with planning, creating and managing user and group accounts.	
CREDITS: 3.00	

EDT 3203	Computer Based Training
Understand the skills needed to develop computer and web-based training courseware, and explore computer and web-based instructional teaching and learning theories and strategies. Understand the basic elements of computer and web-based system courseware and develop skills in designing and delivering computer-based training.	
CREDITS: 3.00	

EDT 3503	Web Design for Learning
Explore current/contemporary web development technology, with a focus on designing and building dynamic, database driven web sites appropriate for use in educational settings. Develop a sophisticated understanding of the role of Internet technology in present day educational settings, with particular attention to the development of Inter/Intranet applications.	
CREDITS: 3.00	

EDT 3703	Multimedia Authoring for Learning
Develop a sophisticated understanding of the principles, best practices and techniques used for creating successful multimedia applications. Explore, develop and design specifications for multimedia applications in an educational context, including storyboards, flow-models and mock-ups.	
CREDITS: 3.00	

EDU 1003	Introduction to Theories of Learning 1A
Examine the development of children from birth to adulthood by investigating the domains of cognitive, linguistic, physical, social, emotional and moral development. Explore theories of child development to gain an initial understanding of the significant influence of these approaches on teaching and learning.	
CREDITS: 3.00	

EDU 1303	Learning Technologies for the Classroom
Develop an introductory understanding of computer hardware, software, and web-based learning technologies that can be used in teaching and learning. Explore the fundamental elements of ICT for learning environments and its underlying pedagogy, educational issues relating to the use of technology in the classroom, the significance of technologies, their impact on society, and how society has changed as a result of them.	
CREDITS: 3.00	

EDU 1503	Introduction to Theories of Learning 1B
Develop an understanding of the theoretical foundations of behaviorism and constructivism. Recognize the modern application of behaviorist and constructivist approaches to teaching and learning. Explore the development of language and identify key beliefs of three theories of first language acquisition: behaviorism, innatism, interactionism.	
CREDITS: 3.00	

EDU 1803	Introduction to Math and Science in the Classroom
Students develop an understanding of how young children acquire and develop foundational concepts/skills of math and science through the process of inquiry (IBL) and application of naturalistic, informal and structured learning experiences. They explore FS/KG curriculum, however will focus on explaining relating, and assessing foundational early math skills, and science process skills. Finally, they examine connections between foundation concepts, learning theory/theorist studied in 1503/1703, and the development of more complex concepts/skills.	
CREDITS: 3.00	

EDU 2303	Language and Development: SLA Principles and Pedagogy
Obtain an overview of key theories of children's acquisition of English (FLA) and consider the contrast with how Second Language Acquisition occurs. Explore the nature of learner language, and variability and gain important practical insights for teaching and learner language development from learner errors.	
CREDITS: 3.00	

EDU 2803	Teaching Learners with Special Needs
Develop a basic understanding of the current philosophies, structure, levels of support, methodologies and assistive technologies required to educate students with special needs in different learning environments. Students explore a variety of case studies to expand their understanding of SEN and challenge their assumptions whilst researching local approaches to special needs.	
CREDITS: 3.00	

EDU 3003	Global Education and Leadership
Learn about the concepts, values, skills, qualities and understanding about leaders and leadership. Develop the analytical, inspirational, persuasive, metacognitive, and critical and creative thinking skills required in an ethical leader as well as practice applying these skills in simulations and team-based practical activities that support reflection and self-discovery.	
CREDITS: 3.00	

EDU 3033	English for Academic Purposes
Focus on the development of academic reading, writing, listening and speaking skills. Examine and interpret a broad range of articles, reports, and academic texts, as well as demonstrate understanding of extended speech on a range of general topics at natural speeds. Create short reports and expository texts such as discussion essays, and demonstrate an ability to take an active part in discussions, while demonstrating a solid understanding of grammar and an ability to understand the multiple meanings of a broad range of words in specific contexts.	
CREDITS: 3.00	

EDU 4003	Research Methods and Reflective Practice in Education
Explore fundamental reflective practice informed by action research principles. Apply this knowledge to the creation of an authentic preliminary investigation into a researchable issue, culminating in an action plan that will be implemented in the following semester as part of a complete reflective practice project. Examine various elements of reflective practice with a focus on qualitative action research methodology.	
CREDITS: 3.00	

EDU 4203	Curriculum Design
Examines the principles and dynamic nature of curriculum through an investigation of definitions of curriculum, evaluation of curriculum and learning outcomes, and differences between syllabus and curriculum. From this examination students evaluate curriculums and design a syllabus to match their learning contexts.	
CREDITS: 3.00	

EDU 4503	Research Project
Develop a sophisticated understanding of action research. Implement the reflective action plan developed in the previous semester based on action research principles, culminating in a reflective action research report.	
CREDITS: 3.00	

EEC 2073	Electrical Engineering Fundamentals
Fundamental concepts of electrical engineering include identifying basic electrical quantities and common scales relative to current, voltage, resistance and power. The construction, value and voltage-current characteristics of common passive components are described and Ohm's law is investigated by using laboratory equipment to measure voltage, current, and power of series, parallel, and series-parallel DC circuits. Kirchhoff's voltage and current laws are used to analyse DC circuits and AC signals are generated in the laboratory and measured in RC, RL, and RLC circuits, with a focus on amplitude and phase. The construction and operation of semiconductors are described.	
CREDITS: 3.00	

EGN 1103	Engineering Measurements and CAD Introduction
Identify and implement workshop health, safety and accident prevention procedures and practices. Measure mechanical and electrical quantities with consideration of measurement accuracy, resolution, significant digits, and tolerance. Identify and implement common methods of fastening and joining engineering materials to build a device. Apply drafting and CAD basics to prepare basic drawings of engineering components and relevant engineering applications.	
CREDITS: 3.00	

EGN 1133	Design Thinking in Technology
Covers the design thinking methodology to identify and address engineering problems. Includes solid modeling, rapid prototyping, understanding end users, their unarticulated needs, and creating alternative solutions. Focus on creativity, identify potential solutions, and innovation of new products and work processes. Students will apply design methodologies and innovation tools in an engineering technology problem, build and test it to gain the spirit and initiative of the course.	
CREDITS: 3.00	

EGN 2101	Computer Aided Drafting
Introduces principles of CAD and free hand for drafting two and three dimensional multi-view and sectional representations of geometric shapes.	
CREDITS: 1.00	

EGN 2233	Engineering Mechanic Fundamentals
Introduces principles of force systems, stresses, fluids, thermal systems, and motion and power transmission.	
CREDITS: 3.00	

EGN 2712	Applied Programing for Engineers
Use algorithms, pseudocode, and flowcharts in the design process of computer programs. High level programming languages consist of primitive data types, operators, flow control, looping structures, error handling, functions, and array data structures, which may be used in the implementation of properly documented programs for engineering technology solutions.	
CREDITS: 2.00	

EGN 2806	Work Placement I
Engage in practical work experience in an environment that develops skills and knowledge. Experience the activities in aviation maintenance, design industry, related aviation industry such as supply and logistics, test and calibration. This initial work placement may be in other engineering fields. Document journal entries explaining placement objectives and critique of the participant attitude, behavior and accomplishment.	
CREDITS: 6.00	

EGN 3012	Project Management
Introduces the necessary tools and information to manage engineering projects and resources. It covers a range of principles and practices in initiating, planning, staffing, coordinating and completing a project within the triple constraint of schedule, budget, and performance. The course strives to strike a balance between the general knowledge of project management and available tools, such as Primavera, OpenProj, and Microsoft Project, to assist in managing real life projects.	
CREDITS: 2.00	

EGN 3103	Project Management
Describe the project management life cycle and discuss stakeholder impact. Develop a project work breakdown structure, define and identify major activities in each project phase, and describe team member roles, responsibilities, and authority. Schedule multiple projects, minimise resource conflicts and use a scheduling software tool to manage projects individually and together. Develop a resource plan with effective cost estimate, budgeting, control, and reporting. Assess and plan for project risk mitigation and auditing. Discuss resource allocation and apply to an engineering project.	
CREDITS: 3.00	

EGN 3212	Economics for Engineering
Apply the basics of economic analysis for quantifying engineering business decisions. Recognize the importance of: the time value of money; analysis of single and multiple investments; comparison of alternatives; capital recovery and tax implications. Advanced analysis of certainty; uncertainty; risk analysis; public sector analysis and break-even concepts related to engineering projects. Demonstrate competency in key economic analysis using hands-on tools like case studies.	
CREDITS: 2.00	

EGN 3333	Health Safety and Environment
Understand and describe common industrial procedures for employee health, safety and environment. The course covers the identification and control of hazards, occupational health, fire protection and prevention, safety management and ethics, safety regulations, safety inspection, accident investigation, personal protective equipment, and safety report documentation. Discuss environment protection, accident prevention, effective committee operations, accident investigation, and safety training.	
CREDITS: 3.00	

EGN 3806	Work Placement II
Gain relevant engineering experience in an actual working environment in order to provide an opportunity to develop and apply professional work ethics and practices. Transfer of engineering skills learned at college to the workplace is a major feature of this course.	
CREDITS: 6.00	

EGN 4333	Renewable Energy Systems
Renewable energy sources and systems for conversion of various forms of energy into electrical power are essential for sustainable systems. Common energy sources such as wind, solar, nuclear, fuel cell, hydro, biomass and geothermal are described by operational principles, block diagrams and construction. This course also introduces factors affecting generation, efficiency and integration of power sources to the grid from wind and solar-based energy systems.	
CREDITS: 3.00	

ELE 2114	Electrical Circuits
DC and AC fundamentals, which include Ohm's law, power dissipation, Kirchhoff's laws, and linear circuit theorems, such as Thevenin equivalence, Norton equivalence, and superposition that are applied to linear circuits. Network analyses of series, parallel, and series-parallel linear circuits with various sources and the description of fundamental energy storage components are included. The transient and steady state analyses are determined for RC, RL, and RLC linear reactive circuits with a sinusoidal source. The steady state response and power dissipation are analyzed.	
CREDITS: 4.00	

ELE 2153	Electrical Engineering Fundamentals
Fundamental concepts of electrical engineering include identifying basic electrical quantities and common scales relative to current, voltage, resistance and power. The construction, value and voltage-current characteristics of common passive components are described and Ohm's law is investigated by using laboratory equipment to measure voltage, current, power of series, parallel, series-parallel DC circuits.	
CREDITS: 3.00	

ELE 2181	Circuit Lab
Practical part of DC and AC fundamentals, which include Ohm's law, power dissipation, Kirchhoff's laws, and linear circuit theorems, such as Thevenin equivalence, Norton equivalence, and superposition that are applied to linear circuits. Network analyses of series, parallel, and series-parallel linear circuits with various sources and the description of fundamental energy storage components are included. The transient and steady state analyses are determined for RC, RL, and RLC linear reactive circuits with a sinusoidal source.	
CREDITS: 1.00	

ELE 2213	Digital Circuits
Fundamental concepts of digital systems, which include numbering systems, digital codes, logic symbols, Boolean expressions, logic minimization techniques, analysis of combinational and sequential circuits, and classification of various integrated circuit (IC) families.	
CREDITS: 3.00	

ELE 2303	Power Generation and Transmission
The layout, main components, and characteristics of common electrical power generation plants are described with application to various thermal power plants. The power transmission process, from generation to distribution is described and expressions for resistance, inductance and capacitance of high-voltage power transmission lines are developed used to determine the equivalent circuit of a three-phase transmission line.	
CREDITS: 3.00	

ELE 2314	Principles of Machines and Power
The fundamentals of common electrical machines used are analyzed through industrial applications. Three-phase electrical circuits are analyzed as well as the operation of single-phase and three-phase electrical transformers. The steady state operation of DC machines and stepper motors is analyzed and the performance characteristics of single and three-phase induction motors are discussed. Practical laboratories are utilized to reinforce concepts.	
CREDITS: 4.00	

ELE 2403	Electronics I
The construction and operation of a semiconductor diode is described and used in various, common and practical applications. The construction, operation, characteristics, and common applications of the bipolar junction transistor (BJT), JET, MOSFET, and IGBT are analyzed theoretically and practically in a laboratory setting. Circuit simulation is also used to reinforce concepts.	
CREDITS: 3.00	

ELE 2573	Electric Circuit Design and PCB Manufacturing
Introduce students to computer aided circuit design and more specifically with CAD tools, since technological advances have allowed the design, construction and control of complex electrical and electronic circuits that cannot be designed with traditional methods. Familiarize students with CAD tools while using the theoretical background of circuit design that was provided in the prerequisite courses of Electric Circuits and Digital Circuits.	
CREDITS: 3.00	

ELE 2603	Instrumentation and Control
Instrumentation and process control topics are described and the difference between open and closed loop control systems is explained in terms of set point, output, feedback, and error. The appropriate transducer is selected, applied, and calibrated for measurement of temperature, flow, pressure, position, level, rotation speed and torque. The appropriate actuator is selected and applied for the control of temperature, flow, pressure, level, and rotation. Various on/off and PID closed loop control systems are described and analyzed through simulation and practical laboratories.	
CREDITS: 3.00	

ELE 2613	Industrial Automation
The Programmable Logic Controller (PLC) has many applications in industrial control systems. The PLC system structure is described in terms of hardware and components and programmed using ladder logic and device wiring techniques. The PLC, timer, and counter instructions are used to safely control simple systems in the laboratory. Systematic faultfinding and debugging techniques are used to implement an industry related application. A PLC controlled through a SCADA system to control and supervise a simple industrial automation system.	
CREDITS: 3.00	

ELE 2903	Sophomore Design Project
Sophomore project requires the formation of a team to propose, plan design and prototype an open ended project. The student team is totally responsible for the completion of the project milestones and course objectives while working under the mentorship of a faculty or industry engineer. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation and prototyping schedule, and estimated cost.	
CREDITS: 3.00	

ELE 3203	Communication Systems
The fundamental components of an analog communication system are described by use of block diagram. Course topics include analog modulation and demodulation techniques used in transmitters and receivers, respectively, and propagation characteristics of the transmission channel. Circuit simulation and laboratories are utilised to reinforce concepts.	
CREDITS: 3.00	

ELE 3323	Electrical Machines
Cover the construction, operation and testing of three-phase electrical machines. Introduce the physical concepts and basic laws governing electrical machines operation. Explain the principles underlying the performance of three-phase electrical machines.	
CREDITS: 3.00	

ELE 3333	Electrical Power Distribution
Covers the fundamentals of electrical power distribution, various distribution system layouts as well as the function of common distribution system substations and equipment including the procedures and protection methods for power distribution systems of consumer installations.	
CREDITS: 3.00	

ELE 3413	Electronics II
The fundamental analysis and design of analog amplifier circuits are implemented for various electronic applications. Specifically, the frequency response of single and multistage amplifiers is determined, with consideration of noise. The properties of A, B, AB, and C power amplifiers is determined and low pass, high pass, band pass, and band stop active filtered are designed. The operation of RC feedback, LC feedback, and relaxation oscillators is described and analysed. Circuit simulation and practical laboratories are utilized to reinforce concepts.	
CREDITS: 3.00	

ELE 3613	Signals and Systems
Time and frequency domain representation of fundamental, continuous and discrete time signals and systems are analyzed. Topics include fundamental signals and operations, system properties, representation of linear time-invariant systems, continuous-time Fourier analysis, Laplace transform analysis, discrete-time Fourier analysis and the application of the Z transform to analyze digital systems. MATLAB is used to simulate, implement, and analyze signals and systems accordingly.	
CREDITS: 3.00	

ELE 3614	Microcontroller Systems
The course introduces the operation and implementation of microcontrollers to practical applications. Common input and output modules are utilised in typical applications in a laboratory setting.	
CREDITS: 4.00	

ELE 4213	Digital Communication
The fundamental operational principles of digital communication systems are discussed. Topics include digital transmission, use of available bandwidth, line coding, PCM, delta modulation techniques and transmission modes. Digital modulation techniques, multiplexing and transmission media are described as well as error detection and correction coding techniques. Satellite and fiber optic communication systems are described as practical applications. Circuit simulation and laboratories are utilized to reinforce concepts.	
CREDITS: 3.00	

ELE 4223	Data Communication and Network
Introduction to the fields of data transmission, networks, and industrial protocols. The topics covered include: LAN, OSI model, elements of the Internet network, and various industrial communications such as Modbus, Fieldbus, and Ethernet implementations.	
CREDITS: 3.00	

ELE 4233	Mobile Communications
The field of mobile cellular communications is presented through discussion of key concepts such as: architecture; cell design; frequency reuse; handoff; interference and capacity; and grade of service (GoS). Propagation radio channel which limits the performance of mobile communication is addressed. A study of digital modulation and its performance over fading channels is covered. Multiple access schemes such as TDMA, FDMA, CDMA and spread spectrum systems are presented. Wireless standards and future development are considered in detail.	
CREDITS: 3.00	

ELE 4243	Satellite Communications
Concepts used in a satellite communication system. Calculation of basic parameters in a satellite communication system. Aspects of satellite communication like orbital mechanics, launching techniques, satellite link design, earth station technology and different access system towards a satellite. Different applications of satellite communication Basic principles, Satellite orbits, Satellite construction (space segment), Satellite links, Earth station (earth segment), Role, applications and antennas of satellite communication.	
CREDITS: 3.00	

ELE 4253	Tetra Communications
Aspects of a TETRA system are. The course introduces trunking principles, service aspects, network planning and architecture. Technical details about the TETRA radio interface are also introduced. Public Digital Mobile Radio Systems and Environment, The Private Mobile Radio Environment, TETRA System Architecture, Components and Services, TETRA layers and Protocols.	
CREDITS: 3.00	

ELE 4343	Power System Analysis
Covers a revision of complex power calculations, per-unit system of analysis, electrical network calculations, topics related to system modelling, load flow analysis, symmetrical components theory, fault analysis and stability problems.	
CREDITS: 3.00	

ELE 4353	System Protection and Coordination
Covers power system protection fundamentals, basic design requirements, and principles of operation for over-current, over-voltage, and under-voltage protection schemes for various power system components. Three-phase short circuit currents are analysed under various conditions and are used as a basis to select circuit breaker types and ratings. Various protective devices, such as over current and earth leakage, differential, distance, over voltage, and under voltage relays, are applied as appropriate. Unit protection, back up protection, and protection coordination are introduced.	
CREDITS: 3.00	

ELE 4363	Power Electronics
Covers control, protection and commutation of power switching devices which includes the diode, thyristor, MOSFET, and IGBT, AC to DC converters, controlled rectifiers, AC to AC converters, single phase and three phase AC voltage controllers, cycloconverters, choppers for DC to DC power conversion, inverters, single phase and three phase pulse width modulation (PWM) techniques, and square-wave inverters.	
CREDITS: 3.00	

ELE 4373	Electric Drives
<p>The theory and control methods for DC and AC electrical drive systems are applied in a laboratory settings. Various methods for controlling the DC and AC motors are presented and mathematical models are used to implement linear control techniques. Various implementations and designs are modeled with the associated control mechanisms using a simulation package, such as MATLAB Simulink, in order to investigate and test the overall DC and AC drive system performance under various operating conditions.</p>	
CREDITS: 3.00	

ELE 4383	Electrical Maintenance Operation
<p>Cover preventive, corrective and opportunistic maintenance and testing of electrical equipment and subsystems including substations, circuit breakers, power transformers, and industrial machines. The Introduce and utilize Electrical Preventive Maintenance and Test (EPMT) program with consideration of electrical safety, switching practices and precautions taken with live circuits. Explore maintenance options with respect to economic considerations and cost benefit analysis.</p>	
CREDITS: 3.00	

ELE 4393	Machine Control and Drives
<p>The design and control strategies for motor drive systems in industrial settings are covered based on the fundamental physical, electrical and mechanical properties of DC and AC motors. The relative merits of various AC inverter circuits for reliable and efficient operation of AC drives are applied to a range of industrial applications. Mathematical modeling and software analysis packages are used extensively.</p>	
CREDITS: 3.00	

ELE 4423	Embedded System Design
<p>Specification, design, development, and testing of real-time embedded microcontroller systems. Various architectures, real-time programming, and interface of common peripheral devices are presented. Concepts are introduced in a theoretical but descriptive form, which are reinforced with numerous sample applications. Students apply learned skills and techniques in a laboratory setting.</p>	
CREDITS: 3.00	

ELE 4433	VLSI Design
<p>The design, simulation, and fabrication of CMOS very large scale integration digital circuits are introduced through basic digital circuits. VLSI technology scaling at both the transistor and interconnects levels is reviewed. Time delay and power dissipation are calculated through simulation of combinational and sequential digital circuits such as full adders, n-bit adders, Latches and Flip-Flops. More advanced topics such as array and Booth multipliers, SRAM and DRAM memory, reliability and radiation hardening are also introduced and discussed at the nanometer CMOS technology nodes.</p>	
CREDITS: 3.00	

ELE 4443	Advanced Microprocessors
<p>Modern microprocessor architecture is introduced and contrasted with classical architecture. RISC and CISC processors are presented along with pipelining and superscalar processors. Modern interfacing techniques are introduced and the features of the approaches are discussed. The student applies the acquired knowledge by developing I/O handler programmes for a modern microprocessor system.</p>	
CREDITS: 3.00	

ELE 4613	Programmable Devices
<p>Programmable devices are used to implement digital circuits. The programmable logic device (PLD) and field-programmable gate array (FPGA) are presented as integrated circuits used to implement combinational and sequential logic circuits. Advantages, cost, programming and reliability are discussed for each type of device. Students use the FPGA prototyping boards to design, develop, synthesise, implement, test, and debug FPGA design project in accordance with a provided specification.</p>	
CREDITS: 3.00	

ELE 4623	Control Systems
<p>Modelling and simulation are used to analyze, augment, and improve the performance of analogue single-input single-output LTI control systems for a variety of applications. Typical control systems are modelled by a transfer function and various frequency response methods are used to determine and assess the system response and stability. CAD tools are used in the design and analysis of various compensators. Basic digital control systems and related properties are described.</p>	
CREDITS: 3.00	

ELE 4633	Digital Control Systems
<p>Presents topics related to digital control systems and includes the components of computer control systems, design and analysis of digital controllers, and typical industrial applications with a distributed control system. The course includes realization of digital control systems, distributed control system architecture, and practical implementation of a simple distributed control system.</p>	
CREDITS: 3.00	

ELE 4643	Intelligent Systems
<p>Artificial intelligence (AI) and related system techniques are discussed and implemented in various applications. Basic AI topics of knowledge representation, search techniques, and reasoning are presented. Concepts and methods used in fuzzy sets and systems are discussed and fuzzy practical applications are identified. The biological origins of artificial neural networks and genetic algorithms are described and implemented in practical applications.</p>	
CREDITS: 3.00	

ELE 4653	Digital Signal Processing
<p>A practical understanding of the fundamentals of digital signal processing is gained through analysis of the time, amplitude, and frequency effects of sampling and digitizing continuous-time signals. The Z-transform and signal flow diagrams are used in the design of various FIR and IIR filter specifications. MATLAB is used to implement and analyze the frequency response. Circuit simulation is utilized to reinforce concepts.</p>	
CREDITS: 3.00	

ELE 4663	Robotics Technology
<p>Mechanical components, transducers, and actuators of a computer automated process. Specifically, a hands-on approach is used to explore robotic embedded systems, associated programming, dedicated controllers, and related applications. The fundamental concepts describing robotics operation including coordinate transformations, sensor and actuator selection and interface, motion analysis, path planning and kinematics are introduced.</p>	
CREDITS: 3.00	

ELE 4673	Advanced Control Systems
Provide a solid background for the understanding of modern control system concepts, analysis and design techniques, and hardware and software packages. Review of classical control systems will be followed by introduction to advanced classical control methods such as state space representation of continuous-time system, continuous-time response and performance specifications, state space analysis and design. In addition, capstone project based on problems drawn from electrical/electronic and industrial applications will be incorporated in all the key design activities.	
CREDITS: 3.00	

ELE 4863	Special Topics in Electrical Engineering
Presents a theoretical or practical topic proposed by the faculty beyond what is offered in existing courses.	
CREDITS: 3.00	

ELE 4893	Directed Study
An investigation under faculty supervision beyond what is offered in existing courses.	
CREDITS: 3.00	

ELE 4902	Capstone Design Project I
A capstone final year project requires the formation of a team to propose, plan and design an electrical engineering project. The student team is totally responsible for the completion of the project milestones and related outcomes while working under the mentorship of a faculty or industry engineer. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation schedule, and estimated cost.	
CREDITS: 2.00	

ELE 4912	Capstone Design Project II
A capstone final year project consists of the implementation, evaluation, and analysis of an engineering design project carried forward from the previous semester. Though guided by faculty, the student team is primarily responsible for the completion of the project milestones and course objectives. The course requires the integration and application of technological, organizational, communication, and interpersonal skills by the student team. Accurate analysis, implementation, documentation, and presentation skills form the basis for assessment.	
CREDITS: 2.00	

ELT 2003	Language Arts A (Speaking, Listening and Vocabulary)
Explore and build on the knowledge and awareness of how language impacts learning and how young children acquire and learn in a second or additional language. Apply significant international models of learning and teaching while examining approaches to the teaching of Speaking and Listening to EFL learners during teaching practice.	
CREDITS: 3.00	

ELT 2203	Language Arts B (Teaching Methods for the Primary School Teacher A)
Explore appropriate methods and strategies for the effective, integrated delivery of Language Arts in a primary classroom. Identify and evaluate a variety of international models for teaching the principles, concepts and skills of English. Consider the implications for integrated content delivery in schools. Explore how to select an appropriate method suitable for the particular aspect of language being taught.	
CREDITS: 3.00	

ELT 2503	Language Arts C (Reading/Writing/Literature)
Develop an appreciation of children's literature and its fundamental role in promoting literacy in primary schools. Develop an understanding of the basic structure of a story and the basic literary genres, and examine their appropriateness for the UAE context. Explore how to develop the ability to deliver fluent and engaging story time sessions.	
CREDITS: 3.00	

ELT 2603	Language Arts D (Teaching Methods for the Primary School Teacher)
Explore appropriate methods and strategies for effective, integrated delivery of Language Arts i.e. teaching of reading in an English medium primary classroom. Identify and evaluate a variety of international models for teaching the principles, concepts and skills of English. Consider the implications for integrated content delivery in schools.	
CREDITS: 3.00	

ELT 3003	Child and Adolescent Literature
Develop student's awareness of the value of adolescent literature as a tool in language teaching. Explore theoretical foundations for the use of literature in the classroom. Develop a bank of classroom applications for the teaching of English as a Second Language (ESL). Publish and share resources and materials.	
CREDITS: 3.00	

ELT 3203	Language Arts E (Teaching Methods for the Secondary School English)
Develop a sophisticated understanding of the teaching of reading in UAE schools. Review and solidify understanding of the complex nature of reading. Deliver a staged reading lesson that prepares, monitors and extends the reader's comprehension through both top-down and bottom-up strategies. Demonstrate basic vocabulary teaching strategies and methods to assess reading comprehension.	
CREDITS: 3.00	

ELT 3503	Literacy and Grammar in the Second Language Curriculum
Develop understanding and knowledge of the language as an essential tool for English language teachers. Raise awareness of English grammar and language used while teaching, and build on existing knowledge. Analyse grammatical functions and structures in terms of form and use and identifying potential second language learner problems.	
CREDITS: 3.00	

ELT 3703	Language Arts F (Teaching Methods for the Secondary School English)
Explore and build on knowledge of literacy development by examining the teaching and learning of writing while considering how to plan for these in the second language curriculum. Examine the complex skills involved in writing, before moving on to analyse a range of approaches and strategies that can be used to teach writing in secondary schools.	
CREDITS: 3.00	

EMA 2013	Methods and Theory for Teaching Mathematics
Students will examine methods and strategies to teach primary mathematics in the 21st Century. They will explore underlying theory, describe the characteristics of engagement in learning math, and examine a variety of methods for differentiation and assessment in a student-centered environment.	
CREDITS: 3.00	

EMA 3003	Tools and Manipulatives for Primary Mathematics
Students will identify, differentiate between, and explore the uses of tools, resources and graphic organizers (GOs) related to primary math learning. They will explore relevant math curricula, linking content to the tools/resources/GOs. And, differentiate between exploratory and practice activities, noting the purpose/value of each in the development of mathematical proficiency. Then, develop clear sequenced instructions for the tools/resources/GOs such to focus on exploration of concepts and processes at the grades appropriate to the major.	
CREDITS: 3.00	

EMA 3013	Inquiry Based Mathematics Teaching and Learning
Students will examine Inquiry-based Learning (IBL) as a foundation for teaching, learning and understanding, and will apply this method to the context of the primary math classroom. Differentiating between the various levels of inquiry, identifying the skills needed at each level, and explaining each stage of the 5 E Model; students will developing Inquiry-based Learning experiences for key curricular content and process skills at grade level.	
CREDITS: 3.00	

EMA 3103	Mathematics Concepts for the Primary School Teacher
Students will define differences in content topics and scope, choose relevant tools, resources and demonstrate mathematical proficiency at a high primary (Gr. 5-6) level. Focus will be on connecting/explaining math processes and applying metacognitive practices. Students will use and track data to analyse and make decisions.	
CREDITS: 3.00	

EMA 3113	STEM Education for Mathematics Teachers
Students will examine and reflect on the value of STEM education/learning in connecting content to 21st Century and higher order thinking (HOT) skills. Students will relate relevant curriculum to STEM learning opportunities and plan an appropriately challenging STEM learning project.	
CREDITS: 3.00	

EMC 2003	Computer Aided Drafting
Understand the fundamentals of 2D and 3D computer aided drafting software for mechanical engineering applications. Apply drawing standards, design layout, drawing notes, dimensioning, drawing scales, tolerances, geometric modeling and assign these to an engineering drawing in AutoCAD. Create engineering drawings in orthographic, sectional and auxiliary views. Combine these new skills to produce assembly drawings and first/third angle projections.	
CREDITS: 3.00	

EMC 2013	Materials Selection and Testing
Apply material selection criteria for specific engineering applications through the understanding and identification of materials, their mechanical properties and material defects. Explain atomic bonding, structure, imperfections, grain-size and re-crystallization and describe material failure and causes of corrosion with prevention methods.	
CREDITS: 3.00	

EMC 2023	Statics and Dynamics
Understand the fundamentals of statics for particles and rigid bodies and the principles of dynamics with engineering applications. Use this understanding to analyse and solve problems in planar equilibrium, forces in structural members and problems in kinematics and kinetics for particles and rigid bodies.	
CREDITS: 3.00	

EMC 2033	Manufacturing Technology
Develop an understanding in the processes and technologies relative to manufacturing technology. Distinguish between the different processing and assembly operations in manufacturing. Identify relevant design factors when selecting a manufacturing process and apply the methodology for a given component. Compare measurement systems, quality control of manufactured parts and technologies associated with Advanced Manufacturing Technology (AMT).	
CREDITS: 3.00	

EMC 2043	Mechanics of Materials
Understand, analyse and determine stress, strain, deformation, strain energy and load carrying capacity of structural members subjected to tension, compression, shear, torsion, bending and stress-strain transformation. Interpret engineering design concepts that are integrated into the course and conduct and analyse related laboratory experiments.	
CREDITS: 3.00	

EMC 2053	Fluid Mechanics
Explain fluid properties, pressure and its measurement for an incompressible fluid. Calculate hydrostatic forces and hydrodynamics through the understanding of buoyancy, forces on submerged surfaces, pipe flow and energy losses. Conduct and analyse practical work through a set of experiments in the hydraulics laboratory to reinforce the theory.	
CREDITS: 3.00	

EMC 3003	Industrial Plant Maintenance
Understand and analyse methods of achieving good organisational and maintenance planning in industrial settings including benchmarking fundamentals, maintenance training, preventive maintenance, condition monitoring, maintenance inventory and purchasing and management reporting. Understand integration and benchmarking best practices in maintenance management and assess world-class maintenance management examples.	
CREDITS: 3.00	
EMC 3013	Fabrication and Welding
Understand health, safety and environmental regulations for common welding practices. Apply basic design, fabrication and welding skills using selected processes such as Oxy-Acetylene (Gas Welding), Manual Metal Arc (MMA), Metal Inert Gas (MIG), Tungsten Inert Gas (TIG) and Electric Resistance Welding (ERW). Design and fabrication of projects making use of both analytical and design simulation software. Conduct quality control checking and testing for the finished products with corrective action and optimization.	
CREDITS: 3.00	
EMC 3023	Thermodynamics I
Understand the first law of thermodynamics using heat transfer mechanisms, forms of mechanical work and the balance of energy; and apply to non-flow processes (closed systems) and flow processes (open systems). Determine thermos-physical properties of pure substances and ideal gases. Apply the second law of thermodynamics for thermal cycles.	
CREDITS: 3.00	
ENT 2003	New Venture Creation
Examines the broad range of challenges faced in creating a new business venture. It covers also issues related to new product or service introduction or new market creation. Identifying sources of funding, organization of the venture, and strategy are reviewed to develop a business plan.	
CREDITS: 3.00	
ENT 2103	Business Negotiations
Focuses on principles and practice in business negotiations. Topics covered include negotiating concepts, strategies, situational applications, and practice in applied techniques. Situations include negotiation in sales, customer relations, global nuances in negotiation situations, employee management, and career development.	
CREDITS: 3.00	
ENT 3023	Small Business Management
Focuses on the management of the small independently owned and operated business. It emphasizes analyzing new business opportunities, planning and establishing a growing concern, and managing the contemporary small business. Students engage in field experiments with small businesses to enhance understanding of the unique opportunities and problems of a small business organization.	
CREDITS: 3.00	

ENT 3103	Leadership for Entrepreneurs
Examines leadership theory and research. It emphasizes the development of leadership skills and interpersonal skills to be an effective leader in a variety of settings.	
CREDITS: 3.00	
ENT 3113	Entrepreneurial Marketing
Focuses on entrepreneurial marketing and sales. It covers concept validation, developing value proposition and a business model, and developing a sales strategy. The course focuses on the process of entrepreneurial marketing of products or services by examining concepts such as the marketing mix, consumerism, and market segmentation.	
CREDITS: 3.00	
ENT 4003	Collaborative and Affordable Design for Entrepreneurs
Looks at the use of focused innovative design for the provision of affordable products and services. Considers cultural aspects in design, as well as ethnographic issues as determinants of design appropriateness and affordability. The course also deals with cross-functional and collaborative entrepreneurship, and looks at how these may be used to help ensure stakeholder engagement, and the viability of entrepreneurial ventures.	
CREDITS: 3.00	
ENT 4013	New Venture Growth Strategies
Deals with the strategic aspects of growing fledgling ventures, as well as the prime strategic issues encountered by new business start-ups. The course looks at contemporary strategic frameworks and techniques for managing venture growth in a controlled and sustainable manner, in competitive business environments. A variety of venture growth case studies, scenarios and simulation exercises are utilized throughout the course to help teach key concepts and techniques.	
CREDITS: 3.00	
ENT 4023	Social Entrepreneurship
The focus of this course is on developing self-sustaining, profitable new social ventures. Topics covered include: facets of social entrepreneurship, social entrepreneurship process, organizing and managing the social entrepreneurial process, discovering opportunity, taking action for impact, and funding, as well as basic aspects of the intrapreneurship process.	
CREDITS: 3.00	
ENT 4033	Raising Funds
Deals with the various methods that may be used by companies, to raise the funds needed to transform their business ideas into functioning businesses, or for scaling up companies that already exist. The course looks at the role of Venture Capitalists (VCs), Angel Investors, Accelerators and Incubators, in fund raising schemes. Strategies for effective fund-raising, as well as the structured business planning that underpins fund-raising are investigated. New approaches such as Crowdfunding and the use of social media to raise funds are discussed.	
CREDITS: 3.00	

ENT 4103	Managing Innovation
To achieve and sustain competitive advantage in today's global business environment, companies must be faster, more creative, nimble, flexible and innovative. The course looks at how competent management of innovation may be used as a source of competitive advantage by organizations. Provides structured frameworks for assessing and enhancing levels of corporate innovation, and examines ideas generation, conversion and diffusion phases of innovative processes. Organizational learning and culture, and their role in sustaining innovation, is discussed. .	
CREDITS: 3.00	

ENT 4113	Commercialization of Innovation
Offers practical information about ways the end-products of innovative processes and activities may be commercialized for societal gain and financial profit. Discusses sustainable and competitively advantageous strategies that may be adopted to grow revenues from innovative activities. The course looks at methods for improving market share and enhancing brand image for products and services emanating from innovation.	
CREDITS: 3.00	

ENT 4133	Managing Intrapreneurship and Organizational Change
Presents intrapreneurship as a business activity that may be used to provide differentiation and sustained competitive advantage. Deals with key attributes of intrapreneurship, and how organizational culture and structures may be developed to support this. The course looks at organizational change characteristics, linking these to intrapreneurship activities within the business. Structured frameworks and techniques are presented for characterizing and effectively managing organizational change.	
CREDITS: 3.00	

ENT 4203	Innovation and Entrepreneurial Research Project
Provides students with the resources to apply the research skills from previous courses as a framework for a final industry-based research project for the Innovation and Entrepreneurial Management major. The final industry research project encourages students to identify and address learning outcomes across major. The purpose is to integrate previously taught stand-alone courses in order to identify opportunities for the application and critical review of theory and practice in a business environment.	
CREDITS: 3.00	

EPC 1403	Practicum 1A
The practicum is central to the Bachelor of Applied Science in Education. In the 'Beginning Teaching' phase of the programme, students complete a 10-15 day practicum in a primary and/or kindergarten setting. During this placement they will observe, implement and reflect upon learning highlighted in the education and methodology strands of the programme. Students will document current practice and undertake a minimum of two, paired or individual teaching activities with small groups of students under the direct supervision of the MST.	
CREDITS: 3.00	

EPC 1903	Practicum 1B
The central component of the education programme is the supervised teaching practicum. Continuing the 'Beginning Teaching' phase of the programme, student teachers complete a practicum over a 10-15 day period in a primary and/or kindergarten setting. Under the direct supervision of the MST, student teachers will apply strategies learned in corresponding courses to teach a minimum of three, paired or individual teaching activities to an entire class for part of a lesson. This should include one start, middle and ending.	
CREDITS: 3.00	

EPC 2403	Practicum 2A
In the first semester of the 'Emerging Teaching' phase of the programme, student teachers complete a practicum over a 12-18 day period during which coursework from corresponding courses will also be implemented. This takes place in a setting appropriate for their degree strand (ECE, EDT, EPR, ELT). Building on Practicum 1b and under the guidance of the MST, student teachers will plan, deliver and reflect upon the efficacy of a minimum of three, paired or individual complete teaching sessions with an entire class.	
CREDITS: 3.00	

EPC 2903	Practicum 2B
In the final semester of the 'Emerging Teaching' phase of the programme, student teachers complete a practicum over a 12-18 day period during which coursework from corresponding courses will also be implemented. This takes place in a setting appropriate for their degree strand (ECE, EDT, EPR, ELT). Building on Practicum 2a and under the guidance of the MST, student teachers will individually plan, deliver and reflect upon the efficacy of a minimum of three, complete teaching sessions with an entire class.	
CREDITS: 3.00	

EPC 3403	Practicum 3A
In the 'Sustained Teaching' phase of the programme, students complete a practicum of 15-20 days in which coursework from corresponding courses is also implemented in a setting appropriate to their degree strand (ECE, EDT, EPR, ELT). Building on Practicum 2b, with MST support, students will plan, deliver and reflect upon the efficacy of a minimum of seven, complete teaching sessions with an entire class. This includes 4 connected sessions in which students will apply formative assessment, personal reflection and critical feedback to inform future planning.	
CREDITS: 3.00	

EPC 3903	Practicum 3B
In the final 'Sustained Teaching' phase of the programme, students complete a practicum of 15-20 days in which coursework from corresponding courses is also implemented in a setting appropriate to the degree strand (ECE, EDT, EPR, ELT). Building on Practicum 3a, with MST support, students will plan, deliver and reflect upon the efficacy of a minimum of 10, complete teaching sessions with an entire class. This includes 4 connected sessions in which students will use formative and summative assessment, personal reflection and critical feedback to inform future planning	
CREDITS: 3.00	

EPC 4406	Practicum 4A
<p>In the 'Autonomous Teaching' phase of the programme, students complete a 25-30 day practicum in which coursework, including a Professional Development Plan and a preliminary research project from corresponding courses, is implemented in a setting appropriate to the degree strand (ECE, EDT, EPR, ELT). Building on Practicum 3b, students plan, deliver and reflect with increased autonomy, on a minimum 50% of MST teaching time. This ideally includes one full week of teaching taking on the full responsibility of the MST.</p>	
CREDITS: 6.00	

EPC 4909	Practicum 4B (Internship)
<p>In the final 'Autonomous Teaching' phase of the programme, students complete a 35-40 day internship ideally in the same setting where Practicum 4a was completed, in which coursework, including a Professional Development Plan and a Research Project from corresponding courses, are implemented. Building on Practicum 4a, students plan, deliver and reflect with increased autonomy, on a minimum 60% of MST teaching time. This ideally includes two full weeks of teaching, taking on the full responsibility of the MST.</p>	
CREDITS: 9.00	

EPR 2003	Language Arts A (Speaking, Listening and Vocabulary)
<p>Explore and examine significant international models of learning and teaching. Additionally, examine and evaluate approaches to the teaching of Speaking, Listening and Vocabulary to EFL learners. Develop and use sophisticated and accurate target language when on teaching practice.</p>	
CREDITS: 3.00	

EPR 2203	Language Arts B (Teaching Methods for the Primary School Teacher A)
<p>Explore appropriate methods and strategies for the effective and integrated delivery of Language Arts in a primary classroom. Identify and evaluate a variety of international models for teaching including principles, concepts and skills. Analyse the implications for integrated content delivery in schools. Select and demonstrate appropriate suitable teaching methods for the particular aspect of language being taught</p>	
CREDITS: 3.00	

EPR 2503	Language Arts C (Reading/Writing/Literature)
<p>Students will explore and analyze the developmental process in children's writing. They will understand how to teach various aspects of writing, including purposes for writing and the many forms or genres of writing. Students will see how writing can be used across the curriculum in the English Medium Primary School. A variety of children's literature will be read and analyzed in terms of its applicability in the primary classroom and this will be used to develop children's literacy by creating motivating tasks</p>	
CREDITS: 3.00	

EPR 2603	Language Arts D (Teaching Methods for the Primary School Teacher)
<p>Explore appropriate methods and strategies for effective, integrated delivery of Language Arts i.e. teaching of reading in an English medium primary classroom. Identify and evaluate a variety of international models for teaching the principles, concepts and skills of English. Consider the implications for integrated content delivery in schools.</p>	
CREDITS: 3.00	

EPR 3003	Mathematics for the Primary School Teacher
<p>Students will develop competency in key content areas necessary to teach primary mathematics including: content knowledge related to problem-solving, numbers, operations, decimals, fractions, algebra, geometry, and measurement as well as their related skills. Familiarization with mathematic curriculum, content, learning tools, resources and standards is a focus. Student will explore mathematics through problem solving and hands-on minds-on methods at the primary level.</p>	
CREDITS: 3.00	

EPR 3203	Mathematics Teaching Methods for the Primary School Teacher
<p>Explore and demonstrate a broad range of student centred strategies to teach primary mathematics. Analyse constructivist and behaviorist learning theories noting the aspects of each that contribute to the learning of mathematics at the primary level. Consider links between planning, differentiation, instruction and assessment. Demonstrate how to appropriately incorporate ICT, and supportive resources/manipulatives to develop and improve the learning experience.</p>	
CREDITS: 3.00	

EPR 3503	Science for the Primary School Teacher
<p>Explore and apply contemporary primary science curricula. Integrate and apply the content knowledge, process skills and productive disposition/attitude needed to teach at this level effectively. Explore and demonstrate proficiency related to the nature of science, scientific skills and science terminology for the following science strands: science and scientific methods, life sciences, physical sciences, and earth and space sciences at a high primary level.</p>	
CREDITS: 3.00	

EPR 3703	Science Teaching Methods for the Primary School Teacher
<p>Develop methods and strategies to teach primary science effectively. Explore constructivism, the inquiry learning process and STEM learning, noting their value in the foundational development of understanding in primary science. Plan for student centred science learning experiences using a 5E model. Identify and distinguish how formative and summative assessments can be used to develop a continuous assessment plan. Demonstrate effective questioning based on Bloom's Revised Taxonomy and effectively use support materials and ICT to develop understanding in primary students.</p>	
CREDITS: 3.00	

ERK 3004	Work Placement
<p>Gain relevant engineering experience in an actual working environment in order to provide an opportunity to develop and apply professional work ethics and practices. Transfer of engineering skills learned at college to the workplace is a major feature of this course.</p>	
CREDITS: 4.00	

ESC 2003	Introduction to Earth and Space Science for the Primary School Teacher
<p>This is an introductory course where students will examine relevant curricula and identify opportunities for experiments (prescribed), and explorations (not prescribed). Identify and explore the differences between and uses of appropriate tools and equipment so they understand their critical role and impact on the teaching and learning of primary science. Potential hazards and safety precautions will be explored.</p>	
CREDITS: 3.00	

ESC 2013	Methods and Theory for Teaching Sciences
<p>Students will examine methods and strategies used to teach primary science in the 21st century. They will explore underlying theory, characteristics of engagement in learning science, as well as a variety of methods for differentiation and assessment in a student-centered environment.</p>	
CREDITS: 3.00	

ESC 2103	Inquiry Based Science Teaching and Learning
<p>Students will examine Inquiry-based Learning (IBL) as the foundation for the development of teaching, learning and understanding. Differentiate between the various levels of inquiry and explore appropriate models for developing Inquiry-based Learning experiences and higher order thinking skills.</p>	
CREDITS: 3.00	

ESC 3013	Introduction to Life Sciences for the Primary School Teacher
<p>Students will develop and plan an inquiry based unit that includes appropriate differentiation and assessment. Student data and evidence will be used to identify misconceptions, monitor progress and inform next steps in teaching and learning through the use of higher order thinking skills.</p>	
CREDITS: 3.00	

ESC 3103	Introduction to Chemistry for the Primary School Teacher
<p>Students will examine and distinguish content topics and scope in the upper primary grade levels (Gr. 5-6). They will demonstrate proficiency with upper primary concepts, key terms, and processes of Life, Earth, and Physical science. Student will gather information and explore content via grade-level investigations, develop their own investigations, and use metacognitive processes to improve their own science processes, practices, and understandings.</p>	
CREDITS: 3.00	

ESC 3113	STEM Education for Science Teachers
<p>Students will examine and reflect on the value of STEM education and STEM learning in connecting a variety of content to 21st Century and higher order thinking skills. Students will relate relevant curriculum to STEM learning opportunities and plan an appropriately challenging grade-level STEM learning project.</p>	
CREDITS: 3.00	

FIN 2003	Financial Management
<p>Provides an overview of financial management basics for financial decision-making. Covers the fundamentals of financial management to support both short and long-term financial decisions of the firm. Includes topics related to sources of short-term and long-term financing, financial statement analysis, time value of money, capital budgeting and working capital management.</p>	
CREDITS: 3.00	

FIN 2013	Money and Banking
<p>Enhances knowledge of money issues, financial systems and financial intermediation theories. The role of money is stressed in modern economics. Appropriate definitions and understanding of the monetary aggregates are provided to allow conduct of effective monetary policies. In addition, implications of the financial intermediation theory and the 'special' role of banks are discussed in the context of monetary policy and bank regulation.</p>	
CREDITS: 3.00	

FIN 2103	Quantitative Methods
<p>Deals with topics such as the time value of money, discounting and compounding as key elements of the mathematics of finance. Discusses parametric and non-parametric statistical significance testing as an integral aspect of the quantitative methods used in decision making. Covers a range of statistical methods include descriptive statistics (measures of location and dispersion), indexing, correlation, simple regression, and time series analysis. Linear programming and optimisation for decision making conclude the course.</p>	
CREDITS: 3.00	

FIN 3003	Corporate Finance
<p>Provides an understanding and necessary exposure to the various tools used in analyzing and evaluating the financial performance of business in terms of risk and return. Emphasizes the fundamentals of calculation and analysis of the various performance ratios and examine the key issues that affect dividend policies and introduces to the concepts of cost of capital, risk and uncertainty in capital budgeting decisions and elements of international finance.</p>	
CREDITS: 3.00	

FIN 3013	Insurance
<p>Reviews global and local insurance industry characteristics, as well as the various roles the insurance industry plays in financial risk management. The course studies the insurance industry at both macro and micro levels. Particular emphasis is placed on the challenges and opportunities facing the insurance industry as a result of globalization, and the changes this will bring to the local insurance market.</p>	
CREDITS: 3.00	

FIN 3103	Corporate Governance and Professional Standards
<p>Critically examine legal and ethical issues pertaining to the banking and financial services industry is part of the core knowledge in finance. The focus is on the application of legal and ethical principles, as well discussing on current industry risk concerns, such as manipulation of financial markets, Basel III regulatory framework, money laundering, corruption and bribery.</p>	
CREDITS: 3.00	

FIN 3113	Behavioral Finance
Surveys research which incorporates psychological evidence into economics. Topics include: prospect theory, biases in probabilistic judgment, self-control and mental accounting with implications for consumption and savings, fairness and altruism, financial market anomalies and theories. The course also includes basics of technical analysis as it is directly related to the market efficiency notion.	
CREDITS: 3.00	

FIN 4003	Entrepreneurial Finance
Covers the planning for, starting and managing of a small business. Students evaluate the options for entering into a small business and the pros and cons of the forms of ownership. Topics include financing the small business, legal constraints of interest to small businesses and the development of realistic financial forecasts. The course involves analyzing financing constraints from VC and banks? perspective, building a complete pro forma financial statements and analyzing the company?s performance	
CREDITS: 3.00	

FIN 4013	Corporate and Retail Banking
Explores the dynamic environment and structure of the banking industry. This course analyzes the extent of the match between the needs of retail clients and products offered by banks. It applies the advanced marketing methods used in retail banking. The course analyzes the financial needs of corporate customers and examines how various banking products satisfy the financial needs of corporation.	
CREDITS: 3.00	

FIN 4023	Financial Assets and Markets
Discusses the basic role of financial markets, the types of financial assets and how they are traded. It examines valuation techniques, derivatives and alternative investments and their associated trading strategies for achieving risk return objectives. From the perspective of equity and capital markets, it explains the importance of capital markets for the economy and corporations.	
CREDITS: 3.00	

FIN 4033	Financial Analysis
Provides students with hands-on experience in financial analysis of business. Students will be exposed to general tools of financial analysis, theoretical concepts, and practical company valuation issues. By the end of the course, students should be comfortable to evaluate the performance, prospects, and value of a business by using financial analysis and valuation methods.	
CREDITS: 3.00	

FIN 4043	Sharia Law and Corporate Governance
Familiarizes students with the sources of Sharia Law and the role of the Sharia Supervisory Board. It further provides an understanding of the formation, authority and responsibilities of the Sharia Supervisory Board. Finally the course elaborates on the corporate governance in Islamic Financial Institutions, and discusses the importance of Sharia Governance, Risk management, legal and regulatory aspects of Sharia Governance, Internal Sharia Controls and Sharia Audit.	
CREDITS: 3.00	

FIN 4053	Islamic Financial Markets
Examines the structure of Islamic financial markets, instruments, and institutions. Looks at the historical development of Islamic financial Assets and markets. The course discusses the Islamic money market and compares and contrasts it to the conventional money market. It further elaborates on Islamic Capital markets and discusses the Sharia compliant instruments involved, including Sukuks, Sharia complaint equity and Mutual Funds. Finally the course provides an overview of Islamic REITs, Exchange traded funds and the role of derivatives.	
CREDITS: 3.00	

FIN 4103	Bank Financial Management
Discusses how bank performance is measured and evaluated using operational performance measures. It demonstrates how banks deal with the various types of risks and explains the different components of bank asset and liability management. It looks at various bank strategies and behaviour including bank funding, lending and pricing.	
CREDITS: 3.00	

FIN 4113	International Finance
Contrasts international finance with domestic finance. Discusses the international financial environment, the foreign exchange market and foreign exchange exposure management. Examines the international monetary system, balance of payments issues, as well as the main factors affecting foreign exchange rates. It discusses how the microstructure of international trade helps in the development of an open economy.	
CREDITS: 3.00	

FIN 4123	Capital Investment
Critically discusses concepts such as the time value of money, risk and return relationships, as well as bond and stock valuation models in the context of financial markets and capital investment. Deals with a range of instruments, principles and theories related to these markets. Mastering of the module will provide students with the ability to synthesize related capital investment techniques and strategies.	
CREDITS: 3.00	

FIN 4133	Portfolio Management and Wealth Planning
Strengthens the student?s knowledge of portfolio management. The module is comprised of a wide range of portfolio management concepts, theories and traditional asset classes. Mastering of the module will provide students with the ability to synthesize complex portfolio management principles, as well as the ability to utilize portfolio management construction tools and evaluation techniques in a professional manner.	
CREDITS: 3.00	

FIN 4143	Islamic Economics
Considers the implications of the application of Sharia law on economic and financial systems. It also compares the different sources of knowledge for economics, stresses the importance of an Islamic worldview to Islamic economics and compares the Islamic economic system with conventional economics. The course further explains how consumption and production are carried out in Islam, and highlights the development of historical Islamic economic institutions such as Zakah, Kharaj, and Waqf, and their economic roles.	
CREDITS: 3.00	

FIN 4153	Islamic Banking
Familiarizes students with the sources and application of funds in Islamic Banking, as well as to asset-based lending products, service-based products and partnership contracts. The course also provides an overview of the financial accounting for Islamic banks and discusses general risk management mechanisms in Islamic banks.	
CREDITS: 3.00	

FIN 4163	Risk Management of Islamic Financial Institutions
Deals with risk identification, characterization and mitigation measures in Islamic financial institutions. It looks at supervisory and regulatory issues in Islamic Financial Institutions that affect how risk is managed. It discusses the role of Shari'ah compliance audits in risk control, and reviews Islamic accounting processes that impact risk management. The course looks at how risk is assessed, characterized and managed in Ijara, Musharaka and Murabaha operations, and in a range of Islamic finance items such as Mudaraba, Wadia and Amana products.	
CREDITS: 3.00	

FIN 4203	Finance Research Project
The project allows students to use the research skills from previous courses as a framework for a final industry-based research project for the Finance major. The final research project encourages students to identify and address learning outcomes across the major. The purpose is to integrate previously taught stand-alone courses in order to identify opportunities for the application and critical review of theory and practice in a business environment.	
CREDITS: 3.00	

FND 0010	Pre Foundations English I
This is the first level of the Pre-Foundations programme. Students who have a CEPA score of up to 139 can be admitted to this course which is equivalent to the beginning levels of the CEFR A1. This is a general English proficiency course with a focus on all four language skills (reading, writing, speaking and listening), grammar, vocabulary, study skills, and IT literacy.	
CREDITS: 16.00	

FND 0020	Pre Foundations English II
This is the second level of the Pre-Foundations programme. Students with a CEPA score of 140-149 can attend this course which is at the CEFR A1+ level. This is a general English language proficiency course that focuses on all four language skills (reading, writing, listening and speaking), grammar, vocabulary, study skills and IT literacy.	
CREDITS: 16.00	

FND 1016	Foundations English Level I
This is the first of four English language courses in the Foundations programme. Students enter Level 1 if their English proficiency is at or below CEFR A2 (CEPA 150), and during the course learn A2 vocabulary, grammar and communicative skills. By the end of the course, students are expected to have reached a high A2 / low A2+ level of proficiency (CEPA 156) in order to progress to Level 2.	
CREDITS: 16.00	

FND 2016	Foundations English Level II
This is the second of four English language courses in the Foundations programme. Students enter Level 2 if their English proficiency is high A2 / low A2+ (CEPA 156-162), and during the course learn A2+ vocabulary, grammar and communicative skills. By the end of the course, students are expected to have reached a high A2+ / low B1 level of proficiency (CEPA 163) in order to progress to Level 3.	
CREDITS: 16.00	

FND 3016	Foundations English Level III
This is the third of four English language courses in the Foundations programme. Students enter Level 3 if their English proficiency is high A2+ / low B1 (CEPA 163-169), and during the course learn B1 vocabulary, grammar and communicative skills. By the end of the course, students are expected to have reached a high B1 / low B1+ level of proficiency (CEPA 170) in order to progress to Level 4.	
CREDITS: 16.00	

FND 4016	Foundations English Level IV
This is the last of four English language courses in the Foundations programme. Students enter Level 4 if their English proficiency is high B1 to low B1+ (CEPA 170-179), and during the course learn B1+ vocabulary, grammar and communicative skills. By the end of the course, students are expected to have reached a high B1+ / low B2 level of proficiency (CEPA 180 / IELTS 5.0).	
CREDITS: 16.00	

FND M010	Foundation Mathematics I
This is the first module of Foundations Math. Module 1 (FND M010) focuses on introducing and developing basic mathematical knowledge, skills and proficiency. The course develops conceptual understanding and procedural fluency and prepares students for Foundations Math 2 (FND M020), the second module, which focuses on further enhancing their knowledge and skills to apply math skills in BAS courses and practical life.	
CREDITS: 4.00	

FND M020	Foundation Mathematics II
This is the second module of Foundations Math. Module 2 (FND M020) builds on the basic mathematical competencies acquired in Module 1 (FND M010). This course focuses on strengthening and building math conceptual understanding, procedural fluency and applied skills further to prepare students effectively to apply math skills in BAS courses and practical life.	
CREDITS: 5.00	

HEM 2106	EMT Basic (I)
Provides the knowledge and skills required for emergency pre-hospital care involving basic medical conditions. Outcomes include the theory and practice related to a range of emergency technical skills, including medical assessment, defibrillation, suctioning, airway management and the fundamentals of competent drug administration.	
CREDITS: 6.00	

HEM 2207	EMT Basic (II)
Provides the knowledge and skills required for emergency pre-hospital care and management of patients experiencing trauma to the upper and lower body, including the abdomen. Theory and practice are provided related to trauma assessment, splinting, spinal immobilisation, and emergency transport.	
CREDITS: 7.00	

HEM 2304	EMT Advanced (I)
Provides knowledge and skills required for an EMT-Basic to progress to competency as an advanced EMT. An understanding of the roles and responsibilities of the advanced EMT within the EMS system is developed. The assessment of emergency medical patient along with pathophysiology, the roles and responsibilities of the advanced EMT, and communication in the pre-hospital setting will be addressed.	
CREDITS: 4.00	

HEM 2404	EMT Advanced (II)
Provides the knowledge and skills required for an EMT-Paramedic to progress to competency as a Paramedic. An understanding of the roles and responsibilities of a Paramedic within the EMS system is developed. The management of emergency medical patients along with pathophysiology, pharmacology, proper medication administration and communication in the pre-hospital setting will be addressed.	
CREDITS: 4.00	

HEM 2508	EMT Advanced (III)
Provides the knowledge and skills required for an EMT-Paramedic to progress to competency as a Paramedic. An understanding of the roles and responsibilities of a Paramedic within the EMS system is developed. The management of emergency medical patients along with pathophysiology, pharmacology, proper medication administration and communication in the pre-hospital setting will be addressed.	
CREDITS: 8.00	

HEM 2902	Ambulance Preceptorship I
Provides the opportunity for clinical practice in the Emergency Medical and trauma life support pre-hospital and hospital setting. Clinical practice will be under the supervision of pre-hospital and hospital staff and related to the required skills of the Emergency Medical Technician. Learners will observe and participate in the application of clinical practice guidelines as approved by the local Health authority.	
CREDITS: 3.00	

HEM 2922	Ambulance Preceptorship II
Provides the opportunity for clinical practice in the advanced life support in a pre-hospital and hospital setting. Clinical practice will be under the supervision of pre-hospital and hospital staff and related to the required skills of the Emergency Medical Technician.	
CREDITS: 3.00	

HEM 3108	EMT Paramedic (I)
Provides knowledge and skills required for the EMT-Paramedic to progress to competency in Advanced Life Support emergency medical care. An understanding of the roles and responsibilities of a Paramedic during complicated situations involving cardiovascular, pulmonary, and neurological emergencies is developed. The management of emergency medical patients along with pathophysiology, pharmacology, proper medication administration and communication in the pre-hospital setting will be addressed.	
CREDITS: 8.00	

HEM 3208	EMT Paramedic (II)
Provides knowledge and skills required for the EMT-Paramedic to progress to competency in Advanced Life Support emergency medical care. An understanding of the roles and responsibilities of a Paramedic during complicated situations involving pediatric, obstetrical, gynecological, geriatric, endocrine, urological, toxicological and traumatic emergencies is developed.	
CREDITS: 8.00	

HEM 3902	Hospital Ambulance Preceptorship I
Provides the opportunity for clinical practice in the Emergency Medical and trauma life support pre-hospital and hospital setting. Clinical practice will be under the supervision of pre-hospital and hospital staff and related to the required skills of the Emergency Medical Technician. Learners will observe and participate in the application of clinical practice guidelines as approved by the local Health authority.	
CREDITS: 3.00	

HEM 3922	Hospital Ambulance Preceptorship II
Provides the opportunity for clinical practice in the advanced life support pre-hospital and hospital setting. Clinical practice will be under the supervision of pre-hospital and hospital staff and related to the required skills of the Emergency Medical Technician- Advanced.	
CREDITS: 3.00	

HEM 3944	Summer Preceptorship
Provides the opportunity for clinical practice in the advanced life support pre-hospital and hospital setting. Clinical practice will be under the supervision of pre-hospital and hospital staff and related to the required skills of the Emergency Medical Technician- Advanced.	
CREDITS: 5.00	

HEM 4003	Advanced Pharmacology
Provides high level training on delivering patient care using advanced pharmacological intervention. Utilisation of international EMS statistics for the introduction of new policies on pharmacological intervention in advanced emergency care is covered. Application of oversight and control procedures using the QA/QI process. An opportunity will be given to develop teaching and training materials regarding advanced pharmacology in emergency care.	
CREDITS: 3.00	

HEM 4103	Emergency Medical Services Management
Assesses the environmental constraints and resource limitations that exist in the United Arab Emirates and similar health care systems throughout the developing world. Development of consistency in basic management, leadership and administrative skills with a clear understanding of the concepts is achieved. Awareness of different theories of management and management styles is gained.	
CREDITS: 3.00	

HEM 4203	Evidence Based Medicine and Research Analysis
Covers reading and analysis of peer-reviewed scholarly papers to prepare EMS responders to make practice recommendations and decisions about all aspects of EMS in light of evidenced-based research. The topics covered include: levels of evidence; detection of bias; research study designs; and statistical.	
CREDITS: 3.00	

HEM 4303	Advanced Clinical Practice
Provides the opportunity for paramedics to review and learn advanced level patient care in all environments and provides advanced medical and trauma care by utilising student prepared workshops and audio-visual/multi media training materials. Opportunity will be given to present the advanced level training material to groups of students.	
CREDITS: 3.00	

HEM 4418	Advanced Clinical Supervision
Prepares the student for Advanced Clinical Supervision and Emergency Medical Services (EMS) Management. Application of quality assurance concepts in clinical practice and in service delivery principles is achieved. Practice advanced level team leadership skills related to the care of critically ill and injured, as well as advanced clinical skills for patient care will be undertaken.	
CREDITS: 8.00	

HEM 4478	International Trip Option for Paramedics
Provides students with the opportunity for specialized training and clinical practice in the prehospital and emergency response setting. This clinical practice and specialized training will be under the supervision of qualified Instructors and local prehospital or emergency response staff.	
CREDITS: 8.00	

HEM 4944	International Preceptorship
Provides students with the required opportunity for advanced life support clinical practice development in an international pre-hospital and hospital setting. Clinical practice will be under the supervision of international local pre-hospital and hospital staff. All clinical experiences are related to the required skills of the Emergency Medical Technician-Paramedic.	
CREDITS: 5.00	

HFT 4002	Helicopter General Handling Ground School I
This is the first course of General Handling. The course is the first part of the conversion to type applied course. FTH N321 covers the basics of Aviation Law and Daylight Flying (Visual Flight Rules) Operational Procedures and Practical Skills Procedures. Students are provided instruction in manoeuvre procedures, air traffic and aviation law, principles of flight and emergency procedures.	
CREDITS: 2.00	

HFT 4013	Helicopter General Handling Ground School II
This is the second course of General Handling academic learning and covers all basic technical content of the aircraft. The course provides instruction on the specific technologies of the Bell 407 aircraft and complements Aviation Science Core courses in Safety Systems, Avionics, Aircraft Systems, Aero-Engines and VFR Instruments.	
CREDITS: 3.00	

HFT 4022	Helicopter General Handling Basic
Covers all Basic practical flying activities necessary for a Helicopter Pilot to successfully and safely fly an aircraft through a range of basic manoeuvres such as take-off and landing, straight and level flight and climbing and descending under forward flight, turning and the full range of hover manoeuvres (take off, land, turn, move forward, backwards and sideways). The basic manoeuvres are carried out in daylight hours, under supervision and in the area near the airfield.	
CREDITS: 2.00	

HFT 4103	Helicopter General Handling Advanced
Provides the students with practical application of all the learning achieved to date. The flying of the Advanced Phase covers more advanced versions of the basic manoeuvres taught in the Basic Phase and adds in the high level competences required to safely manage Helicopter specific emergency situations. In addition, new more complex (and difficult) manoeuvres are included	
CREDITS: 3.00	

HFT 4113	Helicopter Instrument Flying Ground School
This course is a classroom academic Ground School providing students with the knowledge and skills to configure (program) read and interpret instrument used in Instrument Flight Operations, and also conduct Instrument Operations Procedures and Emergencies. The course is large as it includes Procedural Navigation (normal included as a separate course).	
CREDITS: 3.00	

HFT 4122	Helicopter Instrument Flying
The Instrument Flight Phase provides students with the skills and competencies to successfully and safely handle a helicopter in Instrument Meteorological Conditions and teaches pilots to flying the aircraft using only Instruments as visual cues. FTH326 develops a student's practical competencies (both physical and cognitive).	
CREDITS: 2.00	

HFT 4203	Helicopter Navigation
<p>The Low-Level Flight and Navigation Phase provides the student with the skills and competencies to operate the helicopter in close proximity with the ground and ground based objects and to navigate the helicopter at low level. The phase includes both academic and practical instruction. Subjects covered include but are not limited to: navigate by pilotage and dead-reckoning, perform slope operations, negotiate wire obstacles, perform terrain flight mission planning, perform terrain (following) flight, perform confined area operations, perform ridgeline and pinnacle operations.</p>	
CREDITS: 3.00	

HFT 4212	Helicopter Night Flying
<p>The Night Flying Phase, known as the Night Vision Goggles Phase provides the student with the skills and competencies to safely manoeuvre the helicopter after daylight hours. The manoeuvres covered are those covered in all the flying phases of instruction covered until this point but with the additional complication of wearing Night Vision Goggles and flying at night.</p>	
CREDITS: 2.00	

HFT 4221	Helicopter Mission Flying
<p>The Mission Flying Phase is the final and most applied of all the Helicopter Flying Courses and brings together all the individual skills and competencies gained during the whole of the Bachelor. The student will now use the Helicopter Pilot and Aviation Science course knowledge and skills to carry out 8 Military Helicopter Mission Profiles. The course is totally practical and applied.</p>	
CREDITS: 1.00	

HIM 1203	Health Information Coding I (Introduction)
<p>Covers the basics in applying appropriate codes from the latest International Classification of Diseases (ICD) to classify events of morbidity, mortality, surgical procedures and other non-surgical interventions with an emphasis on accuracy, completeness, and sequencing. It covers all body systems. Maternity, oncology, and external causes of morbidity and mortality are also covered. Factors influencing health status and contact with health services are included.</p>	
CREDITS: 3.00	

HIM 2003	Health Information Coding II (Intermediate)
<p>Offers a comprehensive approach to incorporate coding principles from theory to practice at an intermediate level, as well as introducing students to the science of pharmacology, focusing on the rationale for appropriate code assignment. Students are required to apply their knowledge of pharmacology when coding case studies. Students are also required to successfully complete HIM 1203 HI Coding I before commencing this course.</p>	
CREDITS: 3.00	

HIM 2103	Applied Pathophysiology for Health Information Management
<p>Introduces pathophysiological processes of the body systems. The etiology, clinical features, diagnostic testing procedures and management of a selection of disorders affecting the major body systems is studied namely: gastrointestinal; respiratory; cardiovascular including blood and lymphatic, nervous and endocrine; musculoskeletal; urinary; and reproductive systems. An understanding of medical terminology used in describing clinical signs and symptoms, diagnostic techniques, surgical and medical procedures performed that comprise the patient's record is developed.</p>	
CREDITS: 3.00	

HIM 2113	Applied Pathophysiology I
<p>Introduces pathophysiological processes of the body systems. The etiology, clinical features, diagnostic testing procedures and management of a selection of disorders affecting the major body systems is studied namely: cardiovascular, respiratory, gastrointestinal; including blood and lymphatic and endocrine system. An understanding of medical terminology used in describing clinical signs and symptoms, diagnostic techniques (laboratory based and radiological), surgical and medical procedures performed that comprise the patient's record is developed.</p>	
CREDITS: 3.00	

HIM 2203	Health Information Management Studies
<p>Develops an understanding of comprehensive health information management skills: categorisation and processing of patient information into indexes, registers, registries, as well as the more common nomenclatures and classification systems, including the activities and functions of a typical health information management department. Introduces computerised record processing systems, using related patient data systems as examples whilst managing data quality and maintaining patient confidentiality.</p>	
CREDITS: 3.00	

HIM 2313	Applied Pathophysiology II
<p>This course is a continuation of HIM 2113 Applied Pathophysiology I. The course continues to introduce pathophysiological processes of the body systems. The etiology, clinical features, diagnostic testing procedures and management of a selection of disorders affecting the major body systems is studied namely: urinary, musculoskeletal, nervous systems, skin disorders; female reproductive system, obstetrics and newborn care as well as male reproductive system.</p>	
CREDITS: 3.00	

HIM 2323	Legal and Ethical Aspects in HIM
<p>This course provides knowledge of medico legal issues and how this affects the health information manager. It also explores ethical challenges in the management of health information as well as the contemporary health care setting. Upon successful completion of this course, students possess knowledge of medical - legal issues and how this affects the health information manager. Students learn to appreciate the ethical challenges in the management of health information in contemporary health care settings.</p>	
CREDITS: 3.00	

HIM 2403	Introduction to Management in Healthcare
<p>Basic understanding of organisational management, motivation, leadership and conflict management is developed, along with an understanding of the functions of management from the viewpoint of a manager who is responsible for creatively solving problems and facilitating creative problem solving efforts in others.</p>	
CREDITS: 3.00	

HIM 2902	HIM Hospital Preceptorship I
Provides an opportunity for the application of knowledge and skills in an active health record department. Students acquire knowledge in, and experience with, the structure and responsibilities of a health records department and interdepartmental relationships. Students gain procedural experience in assembly, analysis, filing, management of master patient index, management of incomplete record processing, record tracking, and release of health information.	
CREDITS: 2.00	

HIM 3003	Biostatistics
Introduction to statistical concepts and their application in health information management. Emphasis is on the basic concepts and processes that use data to enhance understanding of health information. Topics include measures of central tendency; distributions and hypothesis testing that will be applied to health information management case studies.	
CREDITS: 3.00	

HIM 3013	Health Information Coding III
Develops further knowledge on health information coding using the latest ICD version, along with the application of abstracting complex case studies and the implication of these processes on the provision of better health planning, financing and administration. An understanding of the link between case mix, diagnostic related groups and health funding models and how these tools contribute to the provision of better health outcomes is also developed. Students need to successfully complete HIM 2003 HI Coding II before commencing this course.	
CREDITS: 3.00	

HIM 3103	Health Informatics I
Introduces the essential concepts and applications of information systems (IS) and information technology (IT) in health care environments. Upon successful completion of this course, students are expected to assess and appreciate the appropriateness of computer hardware, software, and networking technologies in health care settings.	
CREDITS: 3.00	

HIM 3113	Health Information Coding IV
This course continues to develop the student's understanding of the coding function with an emphasis on using health information technology applications to assist in the coding process. It examines key elements of revenue cycle management and analyzes the function of HIM professionals using HIT applications in this process. Students evaluate issues related to coding compliance and recommend a coding compliance program based on national and international standards. Students must successfully complete HIM 3013 Health Information Coding III before commencing this course.	
CREDITS: 3.00	

HIM 3303	Epidemiology
Basic understanding of core and central concepts in epidemiology. Includes historical origins, purpose and uses of epidemiology. Emphasis is on measurement as well as data interpretation. Epidemiological study designs are used to enhance understanding of investigation of disease outbreak.	
CREDITS: 3.00	

HIM 3912	Coding Preceptorship I
Offers a clinical coding preceptorship where students apply diagnosis and procedure coding techniques to actual patient records in an acute care practice environment with an emphasis on speed, accuracy, completeness and sequencing. In addition, the preceptorship provides an opportunity to analyze and suggest improvements to coding practices. Students must successfully complete HIM 3912 Coding Preceptorship I before proceeding to HIM 3914 Coding Preceptorship II in the following semester.	
CREDITS: 2.00	

HIM 3914	Coding Preceptorship II
Offers a clinical coding preceptorship where students apply diagnosis and procedure coding techniques to actual complex patient records in an acute care practice environment. The coding preceptorship provides opportunities to code increasingly complex records with an emphasis on speed, accuracy, completeness and sequencing. In addition, the preceptorship provides an opportunity to analyze and suggest improvements for best coding practices standards. Students must successfully complete HIM 3912 Coding Preceptorship I before commencing this course.	
CREDITS: 4.00	

HIM 4013	Quality Management in Healthcare
This course focuses on the concepts and processes of quality and how quality is applied throughout healthcare. It discusses activities and methods of quality improvement in health care facilities generally, and in the health information management department specifically where a quality improvement process is a project within the course. It also addresses the attributes of an effective quality improvement team. In addition, the course includes an introduction and application to the concept of risk management and utilization review processes.	
CREDITS: 3.00	

HIM 4023	Health Informatics II
Applies concepts related to strategic planning, analysis, design, evaluation, selection and implementation of health information systems. The course develops further understanding of health informatics field and the different patient care applications. Finally it applies assessment and evaluation methodologies to e-health applications. Students need to successfully complete HIM 3103 Health Informatics I before commencing this course.	
CREDITS: 3.00	

HIM 4033	Finance Management in Healthcare
This course is an introduction to accounting systems and controls in healthcare, the accounting cycle and books of original entry, accrual accounting and reporting and interpreting financial statements. Topics include assets, liability, equity, balance sheets, income statements, cash flow, inventory, depreciation, managerial accounting, cost accounting, budgeting and decision making as related to cost control. Financial concepts will be covered in terms of its applications to the healthcare industry.	
CREDITS: 3.00	

HIM 4103	Health Data Analysis
Assesses the collection, interpretation and uses of health data beyond the client/patient treatment and disease/operation classification stages. Key emphases include: health data applications in management and clinical decision-making; performance indicators for health care funding, use and evaluation of coded and non-coded sources of health data for research, data management for clinical trials and regulatory and management issues surrounding registries and databases.	
CREDITS: 3.00	

HIM 4303	Health Care Economics and Health Insurance
Develops an understanding of health economics and economic analysis of the health care market. Identifies and assesses factors that control the health care insurance industry; describes and discusses the different models of health care cost control, including case mix funding systems and managed care programmes; describes and discusses the impact of adopting new technologies on cost of health care services; and finally, considers and discusses the ethical and political aspects of these new health care funding models from a global perspective.	
CREDITS: 3.00	

HIM 4413	Strategic Management in Health Care
Focuses on strategic management and its application in health care. Topics covered include: strategic planning and forecasting; marketing; organizational assessment; benchmarking; quality improvement; workplace re-design; and process re-engineering. Applies knowledge and skills gained to develop and evaluate departmental strategic plan and demonstrate the implementation of the plan at departmental and organizational levels.	
CREDITS: 3.00	

HIM 4904	HIM Hospital Preceptorship II
Allows Health Information Management students to work on specific projects related to the programme goals. Projects will be selected from any of the major health information management functions and also in relation to the requests and needs of the host site. The emphasis of this practicum is on working independently and applying work ethics and professionalism. A final project report is to be submitted to the host site supervisor and college instructor.	
CREDITS: 4.00	

HNR 1004	Integrated Nursing Therapeutics - Fundamentals
Introduction to the theory and practice of nursing to include professional values, nursing skills, and best practice are covered in theory, lab, and clinical practicums. Students demonstrate beginner professional practice in the lab and practicum setting, deliver consistently safe and competent care, and start to develop clinical decision making skills. Theory, lab and practicum are combined to introduce students to basic professional nursing skills and practice in relation to assessment, protection, mobility, nutrition, and hygiene competencies.	
CREDITS: 4.00	

HNR 1012	Introduction to Nursing Profession
Students discuss roles and responsibilities, medical law, ethical decision making and current trends and issues in the profession and practice of nursing. Students begin to implement the process of clinical decision making through the utilisation of the nursing process and critical thinking skills. This course therefore aims to give students an understanding of the literature, theories, conceptual frameworks and professional values associated with the profession and practice of nursing.	
CREDITS: 2.00	

HNR 1102	Medical Terminology for Nurses
Covers basic medical terminology for nurses, beginning with prefixes, suffixes and word roots used in the medical and health care language. Students build on this knowledge by identifying, analysing, defining, spelling and pronouncing terms and learning abbreviations related to each of the body systems, as well as basic introductory principles of drug administration routes and drug classifications.	
CREDITS: 2.00	

HNR 1103	Nursing for Chronic Health Challenges
Promotes critical thinking to assist students in developing sound clinical decision making skills in relation to the provision of nursing care and health promotion for adults experiencing chronic alterations in function across the lifespan. A variety of common and contextual chronic states are explored whilst therapeutic and pharmacological interventions for individuals experiencing such conditions are identified.	
CREDITS: 3.00	

HNR 1602	Clinical Pharmacology
Introduces pharmacology and describes the differences between pharmacology, clinical pharmacology, and therapeutics. Topics include: the basic principles of pharmacokinetics and pharmacodynamics; characteristics of an ideal drug; drug administration routes and dose calculation; relevant international and regional legislation; drug development; and classification. Also discussed are adverse drug reactions, drug-drug and drug food interactions, and the drug responses for select groups of patients/clients.	
CREDITS: 2.00	

HNR 1702	Microbiology for Nursing
Provides theoretical and practical techniques in the classification, isolation and identification of microorganisms. The course comprises study of the concepts of infection, transmission of disease, pathogenicity, body defense mechanisms, prevention and control of infections. Students acquire an understanding of the purposes of various microbes and the underlying pathophysiology pertaining to select microbial diseases. Instruction in safe work practices and the concept of the need for quality control are integrated parts of the course.	
CREDITS: 2.00	

HNR 1925	Integrated Nursing Therapeutics - Chronic Health Challenges
Continues to introduce students to basic nursing clinical skills. Students are expected to acquire intermediate practitioner level skills within a laboratory/clinical setting. Newly acquired knowledge is then applied during a 3-week clinical practicum within a chronic care setting.	
CREDITS: 5.00	

HNR 2005	Nursing for Acute Health Challenges
Promotes critical thinking to assist students in developing sound clinical decision making skills in relation to the provision of nursing care and management of adults with acute alterations in function across the lifespan. A variety of common and contextual acute states are explored - including complementary health promotion strategies whilst therapeutic and pharmacological interventions for individuals experiencing such conditions are identified.	
CREDITS: 5.00	

HNR 2012	Clinical Drug Calculation
Utilises critical thinking and pharmacological concepts to solve the many types of problems that may be encountered in the preparation of solutions and administration of medications, to include information that is essential to safe, accurate drug calculation in current clinical practice. Problems addressed will move from the simple to the complex. With individualised instruction, students are encouraged to progress at their own rate and to master the skills involved in the calculation of dosages.	
CREDITS: 2.00	

HNR 2202	Health Promotion Skills Across the Lifespan
The focus of this course is on the nurse's role in promoting health across the life span. The student will explore models of health promotion and apply concepts of health promotion and prevention in different clinical settings. The student will incorporate communication and growth and development theories in the care of individuals, families, and community.	
CREDITS: 2.00	

HNR 2215	Nursing Care of Family: Maternal, Infant and Child
Students utilize a problem solving approach in the provision and promotion of women and infant health care. Concepts to be explored in this course include: promotion of reproductive health; the physiology of pregnancy; management of low risk pregnancy; management of complications associated with pregnancy, labor and childbirth; and care of the newborn infant. Therapeutic and pharmacological interventions associated with health, wellness and management of conditions or disorders are identified.	
CREDITS: 5.00	

HNR 2905	Integrated Nursing Therapeutics - Medical Surgical Nursing
Introduces intermediate clinical skills pertaining to the nursing care and management of individuals with acute health challenges. Students will be exposed to a variety of procedures including: the safe administration of oral, topical and inhalation medications; the administration of parenteral medications; wound management, and the management of casts, braces, skin and skeletal traction. This integrated course will conclude with a clinical practicum within a medical/surgical clinical setting.	
CREDITS: 5.00	

HNR 2924	Integrated Nursing Therapeutics - Family, Maternal, Child
This is an intermediate advanced level course studying the skills for the care of newborn and clients, including: the management of clients undergoing diagnostic/therapeutic procedures; care of mother and fetus during the perinatal period; application of knowledge and skills pertaining to the care and management of a newborn; and understanding and skills pertaining to the care and management of hospitalized pediatric clients. This integrated course will conclude with a clinical practicum within the newborn/pediatric setting.	
CREDITS: 4.00	

HNR 2934	Integrated Nursing Therapeutics - Mental Health Nursing
Students will apply mental health nursing knowledge, including decision making and critical thinking skills, and beginner practitioner skills pertaining to the care and management of individuals with a variety of mental health problems. This integrated course concludes with a clinical practicum within a psychiatric clinical setting.	
CREDITS: 4.00	

HNR 3003	Mental Health Nursing
Develops fundamental knowledge, skills and attitudes relevant to the restoration and maintenance of optimal mental health and recovery from mental illness. Presents the scientific basis of disease for a collection of conditions and disorder types including: anxiety; depression; mania; schizophrenia; anorexia nervosa; substance abuse; and survivors of violence or abuse. Develops introductory skills integral to the assessment of mental health disorders and the evaluation of coping abilities.	
CREDITS: 3.00	

HNR 3013	Leadership and Quality Management in Nursing
Introduces concepts related to leadership and quality management in nursing. Addresses decision-making, problem finding and solving, communication, coordination, and planning skills needed in the current healthcare arena. Includes management of human and non-human resources. The focus recognises change as transformative and pervasive.	
CREDITS: 3.00	

HNR 3204	Public Health Nursing
Public health nursing explores theoretical frameworks and health care policies that underpin public health and community health nursing and relates them to lifestyle challenges faced by individuals, families and groups. This course will encourage students to apply a community oriented, evidence-based approach with emphasis on contextual, health promotion and disease prevention. The course will introduce epidemiology; identify determinants of health, health education and illness prevention strategies for individuals, families and groups; and, discuss vulnerable populations.	
CREDITS: 4.00	

HNR 3603	Introduction to Nursing Research and Evidence Based Practice
Introduces the research process and explores naturalistic (qualitative studies) and traditional scientific research (quantitative studies). Develops skills to critically read and analyze the strengths and weaknesses of sample research studies and introduces the critical steps related to the development of a quality research project.	
CREDITS: 3.00	

HNR 3904	Integrated Nursing Therapeutics - Public Health
Public health nursing integrated course will enable students to develop an understanding of public health and community based nursing. They will develop skills in assessment of an individual and develop rapport with family and community at large. Students will assess physical, sociocultural, environmental factors that influence families and communities, identify populations at risk and implement and evaluate primary care nursing interventions. This course has 60 hours of clinical placement to enable students to integrate theory into practice.	
CREDITS: 4.00	

HNR 3916	Integrated Nursing Therapeutics - Emergency and Critical Care
Expands knowledge and skills of health assessment applied to the care of patients who present to an emergency department or are critically ill. Includes an extensive assessment component such as arterial blood gas analysis, chest radiography, cardiac electrophysiology, cardiac monitoring and respiratory assessment. Addresses concepts such as airway management, modes of ventilation, and management of patients on inotropes. Concludes with a practicum within the emergency/critical care area.	
CREDITS: 6.00	

HNR 4003	Nursing Scholarship and Evidence Based Project I
This course further develops the concepts learned in HNR 3603 Introduction to Nursing Research and Evidence based Practice. Students will develop a research proposal which is a pre-requisite for HNR 4903 Nursing Scholarship and Evidence Practice II delivered in semester 8.	
CREDITS: 3.00	

HNR 4016	Nursing Care of Clients with Complex Health Challenges
Further develops nursing knowledge and critical thinking skills whilst utilising a problem based learning approach through exploration of common, complex health challenges. Technical, scientific, interpersonal and clinical decision-making skills are also further developed whilst legal and ethical issues are debated. Students apply concepts and skills related to the care and management of individuals with acute and/or complex alterations in function in the health care setting.	
CREDITS: 6.00	

HNR 4903	Nursing Scholarship and Evidence Based Project II
Further develops the concepts learned in Nursing Scholarship and Evidenced based Project 1 courses. Students collect data in the clinical/health industry area. Data are processed and findings are articulated in a final research report.	
CREDITS: 3.00	

HNR 4910	Transition to Professional Nursing Practice
Explores current factors that impact the transition from student to the licensed professional nurse. Students examine and apply leadership and management principles in acute and chronic healthcare settings with a focus on safe, ethical, and quality patient care. Students will use an inter-professional approach to coordinate care for a group of patients.	
CREDITS: 10.00	

HPH 1504	Introduction to Pharmacy
Generates understanding of the history and evolution of pharmacy industrial practice areas, drug sources and stages of development of drug products from source to final dosage form, drug classification, nomenclature, legislation, routes of administration and dosage forms, reading, interpretation, appraisal and process of prescriptions and labels for dispensing.	
CREDITS: 4.00	

HPH 2003	Biological Organic Chemistry
Provides opportunities to develop the knowledge and analytical skills required to correlate between the structure and reactivity of alkanes, alkenes, alkynes, cyclo/aromatic hydrocarbons, alcohols, phenols, thiols, ethers, aldehydes, carboxylic acids, esters, amines and amides; molecular properties and physiological roles of carbohydrates, amino acids-proteins-enzymes-co-enzymes and co-factors; nucleic acids and lipids; cycles of transformation of matter and energy production; bio-chemical basis of biological functions and specific disorders.	
CREDITS: 2.00	

HPH 2016	General Pharmacology
Introduces the basic principles of pharmacokinetics and pharmacodynamics, neurotransmission, chemical mediators which cultivates students' knowledge in drug site targets through the pharmacology of the autonomic nervous system, and drug therapy in high risk groups	
CREDITS: 3.00	

HPH 2023	Pharmaceutics I
Introducing the profession of pharmacy including its evolving history, scope of practice, ethical and legal foundations, regulation, sources and stages of drug development, drug classification, nomenclature, routes of administration and dosage forms, reading, interpretation of prescriptions and medication orders. Emphasis is put on the development of the fundamental knowledge, skills and competencies required to perform practical pharmaceutical procedures.	
CREDITS: 3.00	

HPH 2113	Systems Pharmacology
Development of knowledge and ability to apply essential pharmacological concepts to therapeutics decision making. Emphasis is put on the therapeutic rationale and selection of drugs for specific disorders complimented by the general use of prototype drugs, their actions, pharmacokinetics and adverse effects. Major topics include disorders associated with allergies, inflammation, pain, neurological and affective disorders, disorders of musculoskeletal and gastrointestinal systems; drugs of abuse; drugs used in surgical preparations.	
CREDITS: 5.00	

HPH 3013	Pathophysiology and Therapeutics I
Advances essential knowledge required to make judgments in regards to the effects, therapeutic rationale and selection of drugs for specific disorders. Students will develop knowledge and understanding about the disorders of the central nervous and respiratory systems. In addition, the effect of drugs with specific actions on smooth muscle, joints and those agents used in the management of pain are examined.	
CREDITS: 3.00	

HPH 3163	Pathophysiology and Therapeutics II
The focus is on pathophysiology and applied therapeutics of common chronic and acute cardiovascular conditions, including Hypertension, Heart Failure, Ischemic Heart Disease, Atherosclerosis and Vascular Obstructive Disease, Angina Pectoris, Myocardial Infarction, Acute Coronary Syndrome, Diabetes and Thyroid disease. The role of evidence-based medicine in determining therapeutic decisions is emphasised, and builds upon the basic pharmacological and pharmaceutical sciences.	
CREDITS: 3.00	

HPH 4003	Bio-Technology
Enhances the knowledge and understanding of major bio-technology techniques which include rDNA, Hybridoma Technology (Monoclonal Antibodies), Antisense Technology, PCR, Genomics, Proteomics, Gene Therapy, Transgenics, Glycobiology, Cloning, Peptidomimetics and specific preformulation procedures. Familiarises students with parenteral, oral and specialised delivery procedures of biotech products and the impact of biotechnology on pharmaceutical care.	
CREDITS: 3.00	

HPH 4013	Complementary Medicine
Develops the role of the pharmacist in providing medication therapy management services focused upon the safe, appropriate, and effective selection, use, and monitoring of non-prescription, herbal, nutritional and other alternative/complementary medication therapies as well as prevention of health risks and fostering a healthy lifestyle.	
CREDITS: 3.00	

HPH 4073	Pathophysiology and Therapeutics III
Introduces students to the main concepts of pathophysiology and principles of antimicrobial chemotherapy, antineoplastic and immunomodulating drugs. Students apply the appropriate therapeutic management of infectious liver and gastrointestinal tract diseases based on the pharmacological features of drug entities.	
CREDITS: 3.00	

HRM 2003	Professional Practice in Human Resource
Students will examine the changing role of the human resource professional as a strategic partner in managing today's organisations. Key functions such as recruitment, selection, development, appraisal, retention, compensation, and labour relations are discussed.	
CREDITS: 3.00	

HRM 2103	Recruitment and Selection
This course aims to develop the knowledge and skills needed for HR practitioners in the recruitment and selection process related to human resource management. It emphasises the importance of the recruitment and selection plan in achieving organisational goals and objectives. The course also discusses the different selection tools and techniques available and analyses the issues and challenges in the recruitment and selection of foreign and local employees.	
CREDITS: 3.00	

HRM 3003	Performance Management
Explore performance management practices from a theoretical and practical perspectives. It also explore how performance management systems are designed and implemented in organizations and evaluate key aspects of effective performance management systems and tools as well as examine contemporary approaches and practices of performance management in a global competitive environment.	
CREDITS: 3.00	

HRM 3013	Organisational Change Management
Examines ways to implement and manage organization change and innovation by using modern techniques to plan and implement change and innovation. It provides an integrated approach to the theory and practice of organisational change. It particularly involves learning the processes in managing and leading change within the theoretical frameworks of organisational culture, power, politics, and leadership. The course will also consider the design and implementation of effective interventions specifically focused on developing HR related skills	
CREDITS: 3.00	

HRM 3103	Training and Development
Students will develop the proficiency to assess the role of training and development in maintaining a motivated and up to date workforce. Students will compare the way the training and development function is structured in different organisations and will explore the training delivery techniques used in different training programs. The students will learn to develop, deliver and evaluate training programs.	
CREDITS: 3.00	

HRM 3113	Career Development and Planning
This course will include the discussion of the concepts related to mentoring, coaching, replacement charts, skill inventories, career paths, succession planning, position analysis questionnaires, and career development strategies related to plateaued staff. It contributes to the development of essential human resource management skills.	
CREDITS: 3.00	

HRM 4003	Employee Relations and UAE Labour Law
International and local rules and practices will be compared for better understanding of employment-related dispute settlement, and policies and procedures related to the administration of employee benefits and possible labour violations. Employment contracts for commercial enterprises in the UAE will be drafted and collective labour relations will be analysed.	
CREDITS: 3.00	

HRM 4013	Compensations and Benefits
Examines the human resource dimensions of organisational compensation and benefits programs and prepares the students to evaluate compensation and benefits decision making in an organisation. Students will be exposed to contemporary compensation and benefits practices to help them develop required proficiencies.	
CREDITS: 3.00	

HRM 4023	Resourcing and Talent Planning
Introduces the key operational tools, techniques and practices that companies use to resource their organisations effectively. These include recruitment, selection, workforce planning, staff retention, succession planning, retirement and dismissal processes. The main focus of the course is on the role of HR management towards workforce mobilization so that the organisation has the access skills it needs to drive sustained performance.	
CREDITS: 3.00	

HRM 4033	Managing Communications and Emotional Intelligence for HRM
Deals with ways to develop effective communication in organisations by understanding communication processes and the best practice in organisational communication. Communication theory, interpersonal communication, emotional intelligence and perception, the importance of intercultural communication, body language and nonverbal communication, crises communication and strategies for improving communication are covered in this course.	
CREDITS: 3.00	

HRM 4043	Occupational Health and Safety
Students will be able to recognize and assess the hazards and risks in the workplace and formulate prevention action programs to be applied in the workplace. The main focus is on the integration of health and safety within the framework of human resources management and on equipping students with the knowledge and tools for incorporating the health and safety practices into the human resources policy and procedures.	
CREDITS: 3.00	

HRM 4053	Organization Design and Development
Organizational design and development is focused on providing students with an understanding of various theories and models that contribute in designing agile and adaptable organizations to achieve sustainable performance by shaping and aligning organizational strategy with its structures, size, systems, process, people, culture and communication.	
CREDITS: 3.00	

HRM 4103	International Human Resource Management
Develops learners' skills to analyse the implications of internationalisation and globalization of HRM. Learners are trained to distinguish between domestic and international HRM, and to recognise the challenges associated with managing the workforce in foreign locations.	
CREDITS: 3.00	

HRM 4113	Negotiation and Workplace Dispute Resolution
Students will explore the reasons for workplace conflict and compare the types of dispute resolution procedures that are used in both union and non-union workplaces. They will analyse and compare international and local rules and practices for better understanding of possible labour violations and employment-related dispute settlement. Students will analyse issues in individual and collective labour relations and develop a practical approach to dispute resolution.	
CREDITS: 3.00	

HRM 4123	Employee Development through Coaching and Mentoring
Students will explore various theoretical concepts and practical approaches in the use of coaching and mentoring in the overall development of employees in the organisation. It shall also look into the role of line managers as coaches and mentors to employees in the organisation. Students are expected to be able to plan, design, and analyse the efficiency and effectiveness of various coaching and mentoring interventions in the context of local and or international organisations in the UAE.	
CREDITS: 3.00	

HRM 4133	Managing Diversity and Inclusion
Examines the importance of a diverse workforce in an organisation and how this can be upheld as a core competency in building a productive work environment. Theories, policies and practices of diversity management in the workplace will be introduced and discussed.	
CREDITS: 3.00	

HRM 4143	Strategic HRM and HR Analytics
Providing students with a critical understanding of the theories, principles, current issues and practices relevant to human resource management strategy. Strategic HRM course enables students to take a critical view of core strategies for maintaining equity and diversity in the workplace, including of ethical decision-making approaches and best practices in the region for attracting, retaining and developing employees and management from a strategic perspective.	
CREDITS: 3.00	

HRM 4153	HRM Information Systems
This course covers two major aspects of business management that affects the competitive advantage of companies: human resources and information systems. The course uses HRIS including basic concepts and advantages of HRIS with futuristic vision. The course develops the skills to understand HRIS customers, need analysis for HRIS and design HRIS architecture. Students will learn to analyse HR metrics and generate appropriate business reports reflecting cost-benefit analysis and the effect on business outcomes.	
CREDITS: 3.00	

HRM 4203	HRM Research Project
Provides students with the resources to apply the research skills from previous courses as a framework for a final industry-based research project for the Human Resources major. The purpose is to integrate previously taught stand-alone courses in order to identify opportunities for the application and critical review of theory and practice in a business environment. The final research project should be informed and supported where possible by industry in order to provide a high level of authentic learning.	
CREDITS: 3.00	

HSC 1003	Introduction to Healthcare Systems
Explores the organisation of health care delivery systems in the UAE. Examinee health care system components and major influences on health care organisation. Explores different health care systems in societies around the world and identifies the common challenges they face.	
CREDITS: 3.00	

HSC 1013	Human Biology
Introducing the basic concepts of Human Biology by offering the student an insight and understanding of the interrelationships of the various parts of the human body. It provides a foundation for further related and more specialized studies.	
CREDITS: 3.00	

HSC 1023	Chemistry for Health Sciences
This introductory course will discuss fundamental principles of Chemistry basic to the understanding of the health related interdisciplinary sciences. Topics include the classification of materials, subatomic and atomic properties, structure and chemical bonding, chemical nomenclature, chemical quantities and reactions and the analysis of the properties of solutions. A chemistry lab is included to reinforce the major theoretical concepts learned.	
CREDITS: 3.00	

HSC 1033	Anatomy and Physiology
Designed to build upon concepts covered in the Human Biology course. The aim is to extend the students understanding of the workings of the body systems and the communication processes required to coordinate their activities. Topics covered will be the structure and function of the following systems: endocrine, nervous, cardiovascular respiratory, integumentary, immune, urinary and reproductive. A laboratory component will allow students to explore anatomical and physiological concepts through a range of laboratory based activities.	
CREDITS: 3.00	

HSC 1113	Introduction to Healthcare Systems and Professional Practice
Explores the essentials of health. It lays a solid foundation for all Health Sciences programs offered at HCT. It identifies the core concepts in healthcare delivery within the UAE and covers legal and ethical matters as they relate to healthcare delivery. The roles and responsibilities of various health professionals are analyzed, and current and emerging health challenges for the 21st century are identified.	
CREDITS: 3.00	

HSC 1113	Introduction to Healthcare Systems and Professional Practice
Explores the essentials of health. It lays a solid foundation for all Health Sciences programs offered at HCT. It identifies the core concepts in healthcare delivery within the UAE and covers legal and ethical matters as they relate to healthcare delivery. The roles and responsibilities of various health professionals are analyzed, and current and emerging health challenges for the 21st century are identified.	
CREDITS: 3.00	

HSC 1123	Work Health and Safety
Introduces health care students in their first year of study to concepts related to health and safety practices in their work places. It identifies the common workplace risks and hazards. In addition, it highlights the major principles of controlling, preventing and managing risks and hazards in health care settings.	
CREDITS: 3.00	

HSC 1203	Anatomy and Physiology II
The second course in a two-semester sequence designed to build upon certain concepts covered in the Anatomy and Physiology I course. The aim is to extend the students understanding of the workings of the body systems and the communication processes required to coordinate their activities.	
CREDITS: 3.00	

HSC 1233	Human Growth and Development
Examines human growth and development across the life span. Studies growth and development with an emphasis on biological development, health and health promotion. Explores health choices and health issues.	
CREDITS: 3.00	

HSC 1803	Medical Terminology for Health Sciences
Covers basic medical terminology beginning with prefixes, suffixes and word roots used in medical and health care language. Develops knowledge by identifying, analysing, defining, spelling and pronouncing terms and learning abbreviations related to each of the body systems, as well as the basic introductory principles of drug administration routes and drug classifications.	
CREDITS: 3.00	

HSC 2203	Psychology
Psychology is the scientific study of the human mind and behaviour. This course aims to provide an overview of the field of psychology to enable students to gain functional understanding of the human mind and behavior, and apply this knowledge to their field of work.	
CREDITS: 3.00	

HSC 4003	Research Methods for Health Sciences
Develops an understanding of the process of scientific inquiry. Quantitative and qualitative methods are covered. Emphasis is on developing a critical scientific approach to evaluating scientific literature, developing a research proposal and data collection tool. It includes the application of developed theoretical background to a capstone research project in HSC 3006.	
CREDITS: 3.00	

HSC 4006	Capstone Research Project for Health Sciences
Provides an opportunity to perform a research project relevant to their Health Sciences programs. Utilise the research proposal developed to produce an extensive literature review, select appropriate methodology, collect and analyse data and present conclusions in a final capstone report and presentation.	
CREDITS: 6.00	

HSW 1003	Introduction to Social Work
Introduction to values, ethics, history and theory central to social work practice. An understanding of social work methods applicable to systems of all sizes within the framework of a person in environment perspective is developed. Social work roles and career paths are also introduced and discussed.	
CREDITS: 3.00	

HSW 1023	Basic Counselling Skills
Introduces the basic techniques required for effective communication and interviewing. Topics include: active listening skills; questioning and interviewing skills; empathy; the influence of culture on communication; and the importance of self-awareness. Develops skills in analysing communication events, through observation or involvement, and implementation of behaviours for successful responses.	
CREDITS: 3.00	

HSW 1033	Social Diversity and Justice
Focuses on local and global issues of diversity and social justice. Techniques to identify social justice issues as well as skills to successfully intervene with clients experiencing such issues are developed. Impact of diversity on client populations to include identification of strengths are explored. Opportunities for reflection on individual values, beliefs and behaviours towards diversity are provided.	
CREDITS: 3.00	

HSW 1223	Social Work Practice I: Assessment and Documentation
Applies theories and concepts used in social work and child protection. Develops skills of engagement, assessment and documentation, goal and intervention planning, and evaluation.	
CREDITS: 3.00	

HSW 1233	Social Work and Child Protection in the UAE
Examines the roles and responsibilities of Social Workers within the cultural context of the UAE. Analyses problems in both Emirati and expatriate populations, and the role of the social worker in identifying and implementing culturally relevant intervention strategies.	
CREDITS: 3.00	

HSW 1313	Human Behavior in the Social Environment I - Children and Adolescents
Explores the interaction between development, behavior and the environment during developmental stages of infancy through adolescence. Knowledge and application of theories that provide understanding of biological, psychological, cultural and social systems on development will be examined.	
CREDITS: 3.00	

HSW 2013	Vulnerable Populations: Children and Families
Applies knowledge and skills gained in earlier social work courses to specific populations. Increases knowledge of dynamics and risk factors unique to families and children. Applies multicultural practice perspectives to specific cases and uses theory to guide practice interventions.	
CREDITS: 3.00	

HSW 2033	Laws and Ethics in Social Work in the UAE
Develops an increased understanding of the values and ethics that shape social work practice. Develops skills in recognizing ethical issues and applying an ethical legal framework to guide practice decisions and enhance use of critical thinking skills. Attention is given to the International Social Work Code of Ethics as well as other ethical frameworks and their application to UAE social work practice.	
CREDITS: 3.00	

HSW 2133	Social Work with Families
Utilises family theories and models to explore family structure, dynamics and interactions. Structural, communication and behavioural approaches to family interventions as well as continued emphasis on the problem solving approach are presented and applied as culturally relevant models.	
CREDITS: 3.00	

HSW 2143	Social Work Practice II: Advanced Communication and Counseling
Expands knowledge and skills of communication and counselling interventions fundamental to social work and child protection practice. Increases communication strategies to establish and maintain relationship as well as integrate approaches and techniques.	
CREDITS: 3.00	

HSW 2323	Vulnerable Populations: Children and Adults with Disabilities
Extends and applies knowledge and skills gained in earlier Social Work courses to specific populations. Increases knowledge of dynamics and risk factors unique to persons with disabilities. Applies theories such as systems theory to case examples and as a way to guide practice interventions.	
CREDITS: 3.00	

HSW 2324	Child Protection Field Work Education
Provides opportunities for professional social work practice. Students utilize social work skills, theories, ethics and behaviors in a college-approved, human service agency. Integration seminars emphasize ethical practice, problem solving and reflection.	
CREDITS: 4.00	

HSW 3013	Social Work Practice III: Interventions and Case Management
Builds on skills learned in Social Work Practice I and II. Further develops knowledge and skills of culturally competent social work practice. Goal setting, intervention implementation and case management are further developed. Course delivery techniques may include the use of Arabic.	
CREDITS: 3.00	

HSW 3023	Human Behavior in the Social Environment II
Explores the interaction between development, behavior and the environment during young, middle and older adulthood. Knowledge and application of theories that provide understanding of biological, psychological, cultural and social systems on adult functioning will be examined.	
CREDITS: 3.00	

HSW 3033	Advanced Group Work
Expands knowledge of social group work, mutual aid and mezzo level practice. Building on knowledge of group development, dynamics and processes, students will apply knowledge and skills to development of a mutual aid group. The impact of diversity on group dynamics and processes are discussed and explored.	
CREDITS: 3.00	

HSW 3103	Social Work with Groups
Introduces social group work. Develops skills needed to work with different kinds of groups and differentiates the social worker's roles and responsibilities with each. Explores group development, stages, dynamics, processes and skills needed to advance the goals of individual members and group as whole.	
CREDITS: 3.00	

HSW 3223	Social Work Action and Advocacy
Builds on micro, mezzo and macro practice skills needed to work with systems of all sizes. Develops strategies and techniques to ethically advocate for options, services, resources and resource development. Particular emphasis will be given to social work tools of advocacy, negotiation, brokering and mediation as ways to promote planned change with and on behalf of clients.	
CREDITS: 3.00	

HSW 3943	Social Work Field Work Education II
Extends social work knowledge and skills through placement in a human service agency. Students use theories, ethics in practice settings. Weekly integration seminars emphasize ethical practice, problem solving efforts and reflection.	
CREDITS: 3.00	

HSW 4013	Research Methodologies for Social Work
Introduces the importance of evidence based practice to evaluate and inform social work. Develops knowledge of scientific processes and methods involved in research, as well as an understanding of research related concepts, terms and theory. Opportunities to create a research proposal are provided.	
CREDITS: 3.00	

HSW 4033	Social Policy and Social Development
Provides an examination of UAE social policy process. Considers UAE social policy as it relates to vulnerable populations and social well-being. Explores emerging trends and problems of UAE society and methods to advocate and/or evaluate policies to address issues.	
CREDITS: 3.00	

HSW 4216	Capstone Research Project
Provides an opportunity to study UAE social problems, or problem interventions or some aspect of UAE social policy and their impact on client issues. Students select an area of interest, choose methodology, collect, analyse data and present conclusions.	
CREDITS: 6.00	

HSW 4223	Social Work Administration
Builds on mezzo and macro level knowledge necessary for social workers to successfully work in and provide leadership to their agency/organisational settings. Knowledge of social agency structures, roles and functions of administrators and ability to analyse the impact of social welfare policy, funding, agency mission and structure on service delivery are further developed.	
CREDITS: 3.00	

HSW 4233	International Social Work
Explores the historical development and current trends in the field of international social work. Ability to analyze the role of the United Nations and its impact on international social work is developed. Explores other international agencies and current roles for social workers in these organizations. Impact of social policy on international agencies is emphasized within a systems context.	
CREDITS: 3.00	

HSW 4243	Psychological Health and Issues
Applies psychological theories to mental health and treatment of behavioral disorders. Provides opportunities for knowledge and application of theoretical approaches to diagnosis, treatment and prevention. Provides skills to use mental health classification systems.	
CREDITS: 3.00	

HSW 4303	Social Work with Communities
Extends knowledge of community practice and organisational models. Provides knowledge to analyse techniques and strategies needed to successfully conduct community needs assessments, utilize effective communication skills, and apply frameworks to analyze community problems.	
CREDITS: 3.00	

HSW 4927	Social Work Field Work Education III
Extends opportunities to use theory and practice learned through coursework, in a human-service organization. Includes integration seminar that emphasize ethical practice, problem solving and reflection.	
CREDITS: 7.00	

IET 2003	Introduction to Industrial Engineering
Introduces fundamental study areas of industrial engineering and the industrial engineering profession in relation to other disciplines.	
CREDITS: 3.00	

IET 2103	Technology Innovation and Integration
Provides the foundation for automatically capturing data in a system. Topics include automatic identification and data capture systems including bar codes, radio frequency identification, smart cards, biometrics, and the integration of these technologies in problem solving.	
CREDITS: 3.00	

IET 2213	Work Measurement and Ergonomics
Introduces motion and time study tools and techniques used to map and improve industrial and service processes, human capabilities, job requirements, and tool and workstation design.	
CREDITS: 3.00	

IET 2223	Quality Control
Introduces basic concepts of quality engineering and management with a focus on statistical quality control using control charts, capability analysis and acceptance sampling.	
CREDITS: 3.00	

IET 2233	Introduction to Maintenance Management
Introduces concepts and methods maintenance management with a focus on building corrective, preventive and predictive maintenance programs. Topics include maintainability, maintenance planning and scheduling, spare parts inventory management, total productive maintenance and performance evaluation.	
CREDITS: 3.00	

IET 2413	Manufacturing Technologies and Materials
Introduces mechanical properties of materials (metals, polymers, ceramics and composites) and manufacturing technologies (casting, forging, extrusion, drawing, machining and joining) used to process materials.	
CREDITS: 3.00	

IET 2421	Engineering Measurements Lab
To experiment with instruments used in linear, angular, surface, pressure, temperature, force, and strain-related measurements.	
CREDITS: 1.00	

IET 2902	Sophomore Design Project
Perform all aspects of an industrial engineering design project including the formation of a team to propose, plan and design an industrial engineering project. Carry total responsibility for the completion of the project milestones and course objectives while working under the mentorship of a faculty or industry engineer. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation schedule, and estimated cost.	
CREDITS: 2.00	

IET 3203	Operations Management
Introduces capacity planning and line balancing, demand forecasting, inventory models, material requirement planning (MRP) and scheduling.	
CREDITS: 3.00	
IET 3213	Lean Thinking and Six Sigma
Introduces fundamental principles of lean thinking and six sigma methodologies for industry and service organizations. Focus is on the creation of value through the sustainable elimination of waste to improve quality, productivity and work environment.	
CREDITS: 3.00	
IET 3233	Facilities Planning and Material Handling
Introduces empirical and analytical approaches for flow analysis, space requirements, facility layout, material handling, and warehouse functions and design.	
CREDITS: 3.00	
IET 3303	Operations Research
Introduces principles of formulating and solving linear programming models analytically and using software tools for applications in production, logistics, and project management (transportation, transshipment, assignment, and network models).	
CREDITS: 3.00	
IET 3313	Applied Engineering Statistics
Introduces simple and multiple linear regressions, single and multiple factor analysis of variables and design of experiments.	
CREDITS: 3.00	
IET 3613	Financial Analysis and Cost Accounting
Introduces concepts and methods for costing products and services. Topics include cost concepts and classifications, job costing, activity-based costing, process costing, cost-volume-profit analysis, financial statements and evaluation of financial performance.	
CREDITS: 3.00	
IET 4103	Enterprise Information Management
Introduces the basics of information sharing and security, data networks, database design and website development for industrial and service applications.	
CREDITS: 3.00	
IET 4113	Energy Science and Technology
An introductory to conventional and renewable energy technologies, energy sources, production and uses, energy systems, storage and transport, conservation of energy and the future of energy.	
CREDITS: 3.00	

IET 4133	Managerial Accounting
Introducing a business management approach to use accounting information for internal reporting and decision-making is crucial in developing managerial skills. Profit planning and control measures. Providing in-depth knowledge in cost accounting by focusing on its role in internal reporting and resulting decision making processes contribute to development of analytical skills. Evaluating basic costing systems is important while review of pricing and profitability concepts and principles, cost allocations, product quality, and investment decisions further broadens knowledge of graduates.	
CREDITS: 3.00	
IET 4203	Decision and Risk Analysis
Introduces principles of decision making under certainty and under risk. Topics include single and multiple criteria decision models, decision trees and influence diagrams, and Bayesian decision models.	
CREDITS: 3.00	
IET 4223	Human Resource Management
An introduction to principles of human resource management. Topics include skill assessment, recruiting, training, developing and retaining employees, employee health, safety, rights, privacy, security and evaluation and reward systems, employee and labor relations, compensation, and performance evaluation.	
CREDITS: 3.00	
IET 4233	Service Systems Engineering
Introduces the application of industrial engineering methods to the analysis and improvement of services including healthcare, education and government services.	
CREDITS: 3.00	
IET 4243	Total Quality Management
Introduces the fundamental principles and tools of total quality management (TQM). Topics include customers' focus, leadership, strategic planning, human resource practices, performance measures and quality improvement tools.	
CREDITS: 3.00	
IET 4303	Queuing Theory and Process Simulation
Introduces principles of building and analyzing waiting line models in production and services using queuing theory and discrete event simulation.	
CREDITS: 3.00	
IET 4383	Performance Management
Comparison of traditional and contemporary approaches to performance management develops an important area of knowledge in human resource management. Learning about the design and implementation of performance management systems, and the role of compensation, incentives and rewards in performance management contributes to vital HR skills.	
CREDITS: 3.00	

IET 4403	Industrial Robotics
An introduction to the usage of robotics applications in industry, robotic systems. Sensors and actuators, and robot programming and control.	
CREDITS: 3.00	

IET 4413	Computer Integrated Manufacturing
An introduction to the role of computer technology in manufacturing systems. Topics include Computer Numeric Control (CNC), Computer Aided Manufacturing (CAM), Programmable Logic Control (PLC), Automated Guided Vehicles (AGV) and Automated Storage and Retrieval Systems (AS/RS).	
CREDITS: 3.00	

IET 4503	Introduction to Marketing
Introduction to current theories and concepts of marketing. Topics include marketing environment, consumer behavior, market segmentation, product concept, promotion, integrated marketing communication, pricing, distribution channels and strategic marketing.	
CREDITS: 3.00	

IET 4513	Purchasing and Contract Management
This course examines the processes by which goods and services are acquired through purchasing and contract management. Topics include procurement, contract strategies, source selection, identifying contract type, product liability and risk, the bid process and response evaluation; contract risk assessment, contract negotiation, and contract law.	
CREDITS: 3.00	

IET 4523	Warehouse and Inventory Management
To develop understanding of types of warehouses, warehouse environment, inventory control procedures, and technology applications related to the management of warehouse and inventory stock keeping units (SKU). Storage of inventory, placement of inventory, picking, packing, shipping, and other internal logistics management topics will be explored.	
CREDITS: 3.00	

IET 4553	Manufacturing in Supply Chain
Focusing on the influence of manufacturing on the supply chain provides another layer to the analysis of supply chain. The knowledge of common manufacturing systems, and methods of manufacturing planning and control is essential to effectively evaluate the supply chain. Exploring how manufacturing decisions affect supplier service and customer service levels is an interesting exercise. It also enables learners to use manufacturing decision-making models in the development of solutions to overcome supply chain challenges.	
CREDITS: 3.00	

IET 4563	Supply Chain Strategy and Management
Examining the development of supply chain strategies and their interrelationships and impact on business competitive advantage is an insightful task. Presenting a framework to strategically manage supply chains in rapidly changing markets builds further knowledge in the area of supply chain management, and learning how recent developments and best practices in supply chain management have supported the achievement of improved supply chain performance keeps supply chain management skills up to date.	
CREDITS: 3.00	

IET 4573	Supply Chain Risk Management
Reviewing and managing the supply chain from a risk management perspective has great importance. It is in the interest of all organizations to have a coordinated approach involving all stakeholders to reduce supply chain vulnerability. Identifying and analyzing the risk of failure points within the supply chain and quantifying risks via metrics is key to the successful management of the supply chain.	
CREDITS: 3.00	

IET 4583	Procurement and Inventory Management
Examining how businesses make buying decisions, or manage their buying processes within the supply chain is an exciting analysis. The different approaches of inventory management and the assessment of inventory decisions affecting buying practices have great consequences on the firm's performance. The discussion of practices including sourcing, procurement and supply management, or inventory classification; and the review of modern approaches to managing inventory helps the development of critical thinking and managerial skills.	
CREDITS: 3.00	

IET 4593	Customer Relationship Management Systems
Use Customer Relationship Management (CRM) to support business processes and development. Examine how to utilize the information technology resources, strategies, software and processes needed to support an effective CRM strategy. Assess, in particular, CRM techniques, to enhance customer service, sales force effectiveness and marketing strategy. Evaluate the benefits of creating customer loyalty, developing market intelligence and embedding a customer relationship management system into an organization.	
CREDITS: 3.00	

IET 4603	Enterprise Resource Planning
Develop a sophisticated understanding of the concept of ERP systems and how business processes interact in an ERP system in areas of: Procurement, Materials Management, Production Planning and Execution, Sales Order Management, Financial Accounting and Controlling, and Enterprise Asset Management. Develop in-depth theoretical and practical knowledge regarding ERP through exercises and case studies.	
CREDITS: 3.00	

IET 4623	Logistics and Transportation I
Logistics and transportation are two interesting areas of supply chain management. Exploring the roles and best practices of logistics and transportation in the supply chain contributes to the analysis of the performance of a firm. The functions of transportation, warehousing, material handling, packaging, cold chains, security, insurance and economics in logistics are examined in detail, and a framework of how logistics and transportation can optimize supply chain efficiency and improve customer satisfaction is also presented.	
CREDITS: 3.00	

IET 4653	Logistics and Transportation II
Focusing on the management of transportation and logistics to achieve supply chain objectives gives an additional layer to the analysis of logistics and transportation covered in the first part of this course. Analyzing the cost implications of logistics and transportation in making products available to customers helps evaluating the performance of the firm objectively.	
CREDITS: 3.00	

IET 4783	ISO Standards and Excellence
Provides an overview of the ISO family of international standards. Engage with industry to develop quality management systems in accordance with ISO standards. Compares various organizational performance, benchmarking, quality awards and other measures of excellence, such as the Baldrige Quality Award, Khalifa Quality Award and Dubai Quality Award.	
CREDITS: 3.00	

IET 4803	Special Topics in Industrial Engineering
Presents a theoretical or practical topic proposed by the faculty beyond what is offered in existing course.	
CREDITS: 3.00	

IET 4893	Directed Study
An investigation under faculty supervision beyond what is offered in existing courses.	
CREDITS: 3.00	

IET 4902	Capstone Design Project I
This final year course requires the formation of a team to propose, plan and design an engineering project. The student team is totally responsible for the completion of the project milestones and course objectives while working under the mentorship of a faculty or industry engineer. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation schedule, and estimated cost.	
CREDITS: 2.00	

IET 4912	Capstone Design Project II
This final year course consists of the implementation, evaluation, and analysis of an engineering design project carried forward from the previous semester. Though guided by faculty, the student team is primarily responsible for the completion of the project milestones and course objectives. The course requires the integration and application of technological, organizational, communication, and interpersonal skills by the student team. Accurate analysis, implementation, documentation, and presentation skills form the basis for assessment.	
CREDITS: 2.00	

INT 2156	Business Internship I
A range of work related learning activities facilitates students to make direct linkages between the work environment, the understanding of their major field of study and the knowledge gained through major core courses taken in the associate program. It provides an opportunity to integrate business principles and concepts learned in the class room with real life work experience. This course is driven by an evidence based portfolio approach to assessment, enabling students to bring their contextual learning into the final year of associate degree.	
CREDITS: 6.00	

INT 3156	Business Internship II
The business internship program augments knowledge, skills and competencies gained in major specific courses completed in earlier years of under graduate program. It provides an opportunity to integrate business principles and concepts learned in the class room with real life work experience. Students are expected to test theories, apply concepts and gain first-hand knowledge of business operations and procedures. This course takes the holistic view of linking theoretical knowledge with evidence based practical learning.	
CREDITS: 6.00	

LAW 3103	Business and Commercial Law
Provides an insight into the fundamental principles of law including contract and tort and the foundations of UAE law including the Civil Code and the Judicial System. Focuses on the business aspects of law including an introduction to company formation; financial control and workplace issues. Develops an understanding of how law may control business operations and the procedures for resolving conflict and seeking appropriate redress.	
CREDITS: 3.00	

LGE 2003	Logistics Principles and Supply Chain Management
Provides a general overview of logistic elements. Exposure to manufacturing, trade and logistics service sectors, forwarding and transportation, logistic flows, and networks under cost and performance aspects will reinforce fundamental concepts. Provides opportunities to enhance knowledge and skills in analyses and project management through selected case studies.	
CREDITS: 3.00	

LGE 2013	Transportation Modes
Students recognize different technologies in different transportation modes: road, rail, air, seaborne and combined transportation. Students understand the role of logistics in company operations and the role of transportation in company logistics. Road, rail, air, combined and sea transportation: equipment; measurements; handling-related transportation; units and intermodal transportation.	
CREDITS: 3.00	

LGE 2203	Introduction to Enterprise Information Management
Develops practical skills needed for study as well as for later employment. Students learn to manage enterprise data with a spreadsheet software (MS-Excel®) and with a database software (MS-Access®). Skills are developed through reading and many practical exercises using transparencies, a script, online materials and MS Excel® and MS-Access® example files.	
CREDITS: 3.00	

LGE 2313	Managing People and Organizations
Gain an understanding of the linkage between organizations; human resource management (HRM) and business success. Exposed to the principles of organizational behavior and the fundamentals of HRM. Introduced to the concepts of: organization structure and design; power and politics; motivation and job satisfaction; recruitment and selection, employee development and reward management; and the role of HRM in gaining sustainable competitive advantage for the organization.	
CREDITS: 3.00	

LGE 2902	Sophomore Design Project
Sophomore project requires the formation of a team to propose, plan design and prototype an open ended project. The student team is totally responsible for the completion of the project milestones and course objectives while working under the mentorship of a faculty or industry engineer. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation and prototyping schedule, and estimated cost.	
CREDITS: 2.00	

LGE 3203	ERP I Principles
Understand Enterprise Resource Planning (ERP) system in integrated software with applications in all business areas of an organization including: accounting and finance; HR; sales and distribution; production; purchasing; and inventory. Deal with ERP theory and practice including the role of ERP in business process improvement, comparison of ERP and ERP2, ERP functionality and risk issues.	
CREDITS: 3.00	

LGE 3212	ERP II Applications
Introduces ERP in modern business management: the basic concepts; applications; and their significance in business development. During the course students will work with reference models, acquire knowledge of possible solutions and action models for the development, adaptation and implementation of standard application systems. Focuses on financial modules, reporting, materials management and sales capabilities.	
CREDITS: 2.00	

LGE 3413	Sales and Distribution in Logistics
Examines the management of the flow of goods (inventory), services, and related information among members in the supply chain (i.e., suppliers, manufacturers, distributors, retailers, logistics service providers and the end customer). Provides up to date knowledge and modern know-how on planning, designing and controlling the flow of physical goods to a market, along with the information and service necessary to meet customer demand.	
CREDITS: 3.00	

LGE 3503	Accounting for Managers
Introduces management accounting as a tool to improve the operations and the profitability of the organization and examines management accounting field, its methods, purpose, and possibilities. The main content includes the basics of financial accounting, management accounting and decision making, cost management concepts, working capital and investment calculations, budgeting.	
CREDITS: 3.00	

LGE 4003	National Transport and Planning Law
Examines the basics of national and international transport and insurance law. Analyses the evaluation and negotiation of logistics contracts. Introduces transportation legislation, contract law, contract of sale, dispatch, incomers. Discusses obligations and rights of the sender and obligations and rights of the carrier. In the air transport rules, the students are introduced to the Warsaw and the Montreal conventions.	
CREDITS: 3.00	

LGE 4013	Hazardous Goods Management
Learn how to identify and assess risks when dealing with hazardous goods and materials. Design appropriate measures of loss prevention and limitation of loss. Apply such measures in practice, and harmonize them with modern environmental, health-protection and safety systems. Explain the relation between safety and quality management systems and understand principles of legislation and legal norms related to transport of dangerous goods by sea, road and air.	
CREDITS: 3.00	

LGE 4203	GIS in Logistics
Equips students with the required knowledge and skills to use GIS technology to track daily fleet movements and maintenance schedules efficiently, without compromising quality customer service. Explains how GIS can provide a platform for integrating data from existing workforce, fleet, and customer management systems so the company can get the most out of its IT investment.	
CREDITS: 3.00	

LGE 4303	Quality Control and Management
Introduces the students to qualitative and quantitative analytical tools used in a quality management system. An opportunity to study international quality management systems and how efficiently these tools are used to support strategic decision making in managing organizations. Identify problems with workflows within various parts of real organizations. Develops the students' ability to use appropriate quality management tools and to measure their effectiveness towards quality improvement from a strategic perspective.	
CREDITS: 3.00	

LGE 4313	International Human Resource Management
Examining the opportunities and challenges with managing employees in international and cross-cultural contexts. The discussion of international recruitment, selection, preparation, placement, development, performance management, reward and remuneration in international, multi-national and trans-national corporations contributes to the development of vital HR skills. Analyzing implications of internationalization and globalization on HRM, differences between domestic and international HRM, and challenges with managing the workforce in foreign locations enhances critical thinking skills.	
CREDITS: 3.00	

LGE 4403	Port Management
Learn about the business aspects of harbor management and cargo-handling. Covers key issues and principles of implementation of logistics planning structures in harbor areas. Logistics interfaces to other transport systems (rail, road, water transport, air) are included. Additionally, the planning principles of ports, the cost and performance developments in ports are key issues. Examples of harbor infrastructures and the customer relations in different ports are also examined.	
CREDITS: 3.00	

LGE 4413	Airport Management
Provides a fundamental understanding of the broad aspects of managing airports and the basic logistics concepts behind air cargo systems. Includes options of strategic decision-making in airport and air cargo management. Presents a short introduction of the major legislation affecting aviation, and the rules and regulations governing airport operations. Additional topics studied include: air traffic control; terminal management; and ground infrastructure of airports; and introduction to planning and running of air cargo systems.	
CREDITS: 3.00	

LGE 4423	Intermodal Freight Transport
Introduces the concept of intermodal freight transport, the means of delivering goods using two or more transport modes. Detailed explanations are given of the road and rail vehicles, the loading units and the transfer equipment used in such operations.	
CREDITS: 3.00	

LGE 4433	Public Transport
Focuses on the particularities of transport economics and the requirements on cost accounting in the public transport sector. Discusses the planning, building and maintenance of public traffic areas. Examines the planning of route networks and time schedules for public transportation. Develops an understanding of pricing, ticketing and the economics of timetables which are also essential for public transport.	
CREDITS: 3.00	

LGE 4443	Airline Management
Develops an understanding of airline management decision processes, with an emphasis on economic issues and their relationship to operations planning models and decision support tools. The application of economic models of demand, pricing, costs, and supply to airline markets and networks are covered. Other aspects include industry practice and emerging methods for fleet planning, route network design, scheduling, pricing and revenue management and interactions between the components of airline management and profit objectives in competitive environments.	
CREDITS: 3.00	

LGE 4453	Management of Distribution Networks
Implementation of concepts, forging plans, steering and optimizing global distribution networks. Modern collaboration concepts to assess feasibility and consider implementation hurdles. Conditions of distribution network transformation. Analysis and evaluation of value chains in different contexts and the current challenges of the management of global value will also be taught in this course. Practice works with SCM Systems like SAP SCM complete the course.	
CREDITS: 3.00	

LGE 4463	Maritime Transport
Develops familiarization with current maritime transportation concepts from a geographic point of view. Elaborates on the transportation practices of businesses in the competitive environment of EU, CR and of world markets. The goal is also to gain ability to use the knowledge effectively in an enterprise management.	
CREDITS: 3.00	

LGE 4603	Transport and Economic Geography
Geography and transportation intersection in terms of movement of people, goods, and information. Commuting, supplying energy needs, distributing goods, and acquiring personal wants. Examines the need for developing sufficient transport networks to meet growing economic development and mobility needs. Explains location theory and the rationale for the location of industry and systems in their current location. Develop understanding of the role played by geography and geographic barriers, and of the spatial location aspects of the solutions to economic problems devised by societies	
CREDITS: 3.00	

LGE 4803	Special Topics in Logistics Engineering
Presents a theoretical or practical topic proposed by the faculty beyond what is offered in existing courses.	
CREDITS: 3.00	

LGE 4893	Directed Study
An investigation under faculty supervision beyond what is offered in existing courses.	
CREDITS: 3.00	

LGE 4902	Capstone Design Project I
This final year course requires the formation of a team to propose, plan and design an engineering project. The student team is totally responsible for the completion of the project milestones and course objectives while working under the mentorship of a faculty or industry engineer. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation schedule, and estimated cost.	
CREDITS: 2.00	

LGE 4911	Capstone Design Project II
This final year course consists of the implementation, evaluation, and analysis of an engineering design project carried forward from the previous semester. Though guided by faculty, the student team is primarily responsible for the completion of the project milestones and course objectives. The course requires the integration and application of technological, organizational, communication, and interpersonal skills by the student team. Accurate analysis, implementation, documentation, and presentation skills form the basis for assessment.	
CREDITS: 1.00	

LSC 1013	Introduction to Chinese Language and Culture
Provides a basic introduction to the language and culture of China. Students gain an understanding of Chinese heritage and culture, geography and society, simple conversation and the Mandarin script.	
CREDITS: 3.00	

LSC 1103	Academic Reading and Writing I
First semester BAS course focusing on basic research and academic reading and writing skills. Connects reading to vocabulary acquisition and to the production of academic-style essays containing references. Students apply techniques such as brainstorming, organising and planning to generate ideas, as well as drafting, revising, editing and proofreading written work.	
CREDITS: 3.00	

LSC 1503	Academic Spoken Communication
Students explore the use of spoken English in academic and professional contexts. They analyse extended formal speech as well as mini-lectures, and identify non-verbal features such as emotions from both linguistic and non-linguistic clues. Students then apply the knowledge gleaned to take part in discussions and other spoken activities, such as creating and delivering presentations, delivering public speeches, and participating in interviews.	
CREDITS: 3.00	

LSC 2103	Academic Reading and Writing II
Fourth semester BAS course focusing on refining the skills needed for understanding longer texts and developing academic integrity and competency in writing academic English on a researched topic to a professional standard. Students interpret information and argument provided in longer academic texts and produce written English which successfully demonstrates their critical understanding of a topic and clear use of academic honesty principles using standard APA guidelines.	
CREDITS: 3.00	

LSC 2183	English for Specific Purposes
Designed to improve the oral and written English communication skills of students studying degree programmes in Engineering, Health Sciences, IT, Applied Media and Business. Using input from texts, videos, and audio materials on a range of topics related to their programme studies, students actively participate in engaging work-related discussions and decision-making tasks with a strong focus on professional language use.	
CREDITS: 3.00	

LSC 2203	English for the Workplace
Develops English communication and literacy skills through an exploration of the UAE labor market. Considers the psychological bases of work-related interpersonal skills that reduce stress, increase well-being and enhance efficiency. Enables reflective career planning and the creation of effective self-marking materials including curriculum vitae, personal statements, cover e-mails and online applications.	
CREDITS: 3.00	

LSC 2213	English for Leadership
This course enables students to analyze and discuss a range of leadership concepts and leadership theories through research and evaluation of UAE and World leaders. A range of communication tools used by effective leaders will be introduced and students will put these skills into practice.	
CREDITS: 3.00	

LSC 2223	Critical Thinking in English
Identify and construct sound arguments in English, often concerning fact, definition, evaluation, and proposal. Identify common strategies in English which seek to hinder critical communication in speech and writing and help students avoid common errors in reasoning. Construct coherent arguments which adequately manage pathos, ethos, and logos.	
CREDITS: 3.00	

LSC 2233	Intercultural Communications in English
Provides a platform for students to explore intercultural communication issues in global society. Describes the key concepts and components of effective Cultural communication and compares and contrasts cultural frameworks.	
CREDITS: 3.00	

LSC 2243	Ethical Communications in English
Describe ethics as a discipline. Apply various forms of moral reasoning and ethical standpoints in communicative ethical decision making in interpersonal relationships, small groups, organizations and intercultural contexts. Discuss the role of ethics in professional or educational contexts. Explain and critique various issues in local and global ethics, including sustainable development. Justify and reflect on your own code of ethics.	
CREDITS: 3.00	

LSM 1003	Applied Mathematics
Solve business applications involving buying, selling and percentages. Compute and describe data using basic statistical techniques. Use linear models for business decision making. Apply linear regression and correlation analysis to problems with two business variables. Solve business problems involving simple interest and compound interest.	
CREDITS: 3.00	

LSM 1103	Technical Mathematics
Demonstrate competence in algebraic manipulation by extending properties of numbers to symbols. Recognise characteristics of real numbers and apply these to solve real world problems. Solve equations algebraically and apply them to real -world problems. Explore geometric relationships, and apply techniques and formulas to solve real world problems. Recognise functional relationships and their graphs, and apply them to solve real-world problems and interpret solutions.	
CREDITS: 3.00	

LSM 1113	Statistical Mathematics
Categorise, organise, summarise and present data in a meaningful way. Compute measures of central tendency and variability of data sets. Apply basic rules of probability to calculate the likelihood of random events. Construct the probability distribution of a discrete random variable and demonstrate its application to real life problems. Describe the characteristics of the normal distribution and demonstrate its application to real world problems. Perform regression analysis to make informed predictions about relationships between quantitative variables.	
CREDITS: 3.00	

LSM 1123	Quantitative Reasoning
Apply the principles of inductive and deductive reasoning. Demonstrate proficiency in mathematical skills and conceptual understanding of the following topics: number theory, mathematical modeling, contemporary applications and geometry. Apply mathematical concepts to a variety of real world problems. Apply the concepts learned to the fields of music, design, photography and media in a project-based environment.	
CREDITS: 3.00	

LSN 1113	Introduction to Sustainability
Define sustainability and sustainable development. Explain the environmental, social, and economic significance of natural resource extraction at a local, regional, national, and global level. Understand and explain the human impact on the planet using a variety of measures. Recognise the human impact on basic ecological systems. Relate the concept of social responsibility to local, regional, national, and global issues.	
CREDITS: 3.00	

LSN 1303	Health and Wellness
Covers the discussion of what constitutes health and well-being and their various dimensions and the techniques that one can adopt for their development and maintenance. Basic human anatomy and physiology, fitness, nutrition and the varying nutritional requirements in different life stages, stress and stress management, and psychosocial development are presented and discussed. First Aid training is also presented and administered.	
CREDITS: 3.00	

LSN 2433	Ecology
Recognise basic ecological concepts and describe a variety of interactions between organisms, natural selection and adaptation to the environment. Define species, population, community and ecosystem. Recognise the main marine and terrestrial ecosystems in the UAE and the Gulf Region and major land ecosystems in the world. Describe the carbon, hydrological and nutrient cycles and identify human influences on these cycles. Describe practical applications of ecological knowledge: nature conservation and waste management.	
CREDITS: 3.00	

LSN 2503	Introduction to Nutrition
Identify the major physiological areas that are affected by nutrition. Describe the fundamental physiology of digestive processes. Evaluate energy needs and balance along with their health implications. Identify the effect of poor nutrition to illness and diseases, including but not limited to food borne diseases, diabetes, and cardiovascular diseases. Understand the importance of food safety and security in the preparation and storage of food. Describe the role of nutrition in growth and health throughout the life cycle.	
CREDITS: 3.00	

LSS 1003	Life and Study Skills
Recognizes the importance of life-skill development for successful learning. Introduces HCT regulations, services and learning support systems. Deals with psycho-social skills for decision making and time/stress management. Develops study and communication skills for critical thinking, problem solving and creativity. Improves inter-personal empathy leading toward satisfying academic and professional lives.	
CREDITS: 3.00	

LSS 1123	Basic Methods of Scientific Research and Development
Introduces the basic concepts and processes of scientific research, innovation and development. Enables students to identify research problems, formulate hypotheses, write a literature review and collect, analyze and interpret data. Clarifies the importance of ethical research behavior. Provides practical opportunities to apply creative and innovative thinking to research problems and write an associated research report.	
CREDITS: 3.00	

LSS 2403	Innovation and Entrepreneurship
Applying a Stanford-informed approach to learning innovation and entrepreneurship develops the concepts and skills of how to start and run new ventures and discusses challenges entrepreneurs face in a rapidly changing economic environment. The course covers three main modules: design thinking, entrepreneurship, and growth and leadership.	
CREDITS: 3.00	

MAR 1010	Marine Engineering Sea Time I
Introduces the first course of the seetime courses in the program. It will be conducted at sea, and will be supervised by a senior officer on board. A detailed record will be kept which will be assessed by HCT staff. The material will include: use of hand tools; watchkeeping; electrical systems; auxiliary equipment; and maintenance.	
CREDITS: 10.00	

MAR 1403	Fabrication and Repair I
Introduces workshop practices and the use of machine tools as relevant to seagoing marine engineers. The course also provides basic quality control checks of finished products. Material includes health, safety and environment regulations, and proper use of fabrication tools and regular logbook maintenance skills.	
CREDITS: 3.00	

MAR 1502	Marine Chemistry
Introduction to marine chemistry covering the properties of matter in terms of fundamental principles and provides the understanding of chemical energy concepts. In this course, the students will be introduced to gas law and kinetic theory of gases, spontaneity of reaction, chemical equilibrium, properties of solutions, and study the phenomena of liquid at interface. Attention is focused on applications of particular interest to the marine environment.	
CREDITS: 2.00	

MAR 1602	Introduction to Marine Engineering and Maritime Regulations
Basic introduction to marine engineering, designed for students undertaking the Bachelor of Applied Science, Marine Engineering Program. This will include basic information on marine engineering and the relevant rules and regulations governing maritime operations, including classification societies and IMO.	
CREDITS: 2.00	

MAR 2004	Fabrication and Repair II
Builds upon the fabrication and repair course in first semester, together with the experience that the cadets will have obtained during their first period of seetime. It covers more advanced fabrication techniques, including the construction of a more elaborate example piece. Health and safety issues continue to be emphasized.	
CREDITS: 4.00	

MAR 2023	Marine Materials
Introduction to the wide range of materials used in the maritime environment. It covers: mild steel; stainless steel; aluminium; concrete; wood; and glass reinforced plastic. The particular issues with each of these for the maritime environment are discussed, and applications for each included. In addition, the particular properties of the wide range of different mild steels is discussed in detail.	
CREDITS: 3.00	

MAR 2033	Marine Engineering Knowledge I
Introduction to the theories and principles of a very wide range of marine engineering equipment, including: main engines (different types); auxiliary engines; marine boilers; shafts; seals; tanks (fresh water, ballast, and cargo); valves; air conditioning equipment; refrigeration equipment; pumps (different types); steering gear; stabilizers; and scrubbers.	
CREDITS: 2.00	

MAR 2203	Naval Architecture
Introduction to the maritime profession, including information on ship design, the ship building, designing and operating professions. An introduction to the rules and regs governing maritime operations, class societies and IMO. An introduction to principal features of ships. Hydrostatics, intact stability, small angle stability, cross curves and large angle stability, including righting arm curve. Free surface, list and loll angles, and trim. The concept of the trim and stability booklet is introduced, and its application explained. Stability criteria.	
CREDITS: 3.00	

MAR 3010	Marine Engineering Sea Time II
Provides the second opportunity for students to be at sea, the course will be supervised by a senior officer on board. A detailed record will be kept which will be assessed by HCT staff. The material will include: watchkeeping; practical engineering knowledge; electrical systems; maintenance; and practical control engineering.	
CREDITS: 10.00	

MAR 3023	Fabrication and Welding II
Covers the application of advanced fabrication and welding skills. It includes material on joining and cutting metals and fabrication using a wide variety of techniques, as applicable on board a ship. It includes the fabrication of an example piece, which makes use of a wide variety of the skills learned in this and preceding courses. Health and safety issues continue to be emphasized.	
CREDITS: 3.00	

MAR 3033	Marine Engineering Control I
This course is an introduction to the basic applications of automatic control theory and the use of these concepts in a wide variety of different marine applications. Different concepts of control theory are considered, and their applications on board ships discussed. Typical control hardware is studied, and examples given.	
CREDITS: 3.00	

MAR 3043	Diesel Engine Maintenance
Outlines a comprehensive introduction to the maintenance of diesel engines in the maritime environment. Typical large low speed two stroke diesel engines are included, as well as smaller high and medium speed diesel engines. In addition to routine maintenance, troubleshooting issues are included.	
CREDITS: 3.00	

MAR 3053	Electrical Power Engineering
Includes an introduction to the fundamentals of common electrical machines used in maritime environments. The physical concepts and basic laws governing electrical machine operation are introduced, and the principles underlying the performance of electrical machines are explained. In addition, the course covers power transformation and transmission in ships. A number of shipboard applications are given.	
CREDITS: 3.00	

MAR 3103	Marine Machinery Systems
Introduction to machinery systems used on ships, both for main propulsion and auxiliary/hotel loads. This will include: low speed diesels; medium speed diesels; steam turbines; gas turbines; boilers; electric propulsion; podded propulsion; bow thrusters; controllable pitch propulsion; scrubbers; pumping and piping; electricity generation; fuel supply; rudders and steering gear; cranes and other deck machinery; and automation issues.	
CREDITS: 3.00	

MAR 3202	Ship Production
Covers the overall philosophy and techniques for the manufacture of ships, including materials, welding, and cutting, shipyard practice and shipyard layout, with the differences between approaches for different ship sizes and types covered.	
CREDITS: 2.00	

MAR 3303	Resistance and Propulsion
Introduction to the resistance and propulsion of surface ships. It includes: components of resistance; Froude's law of similitude; the principles associated with model testing for resistance prediction; systematic series; ship-propeller interaction and an introduction to the use of Computational Fluid Dynamics, as applied to ship resistance prediction. The concepts associated with the design of a ship's propeller are also covered, including: the principal features of propellers; the use of systematic series; and cavitation.	
CREDITS: 3.00	

MAR 3402	Ship Structures I
Provides an introduction to rationally based structural design and optimisation for ships. Loading and responses in ship structures. Bending of the hull girder, and hull girder response. Application of beam theory to typical ship types, including those with open decks. Fatigue and fracture of ship structures, including an introduction to fracture mechanics.	
CREDITS: 2.00	

MAR 3503	Design of Ships and Maritime Structures
Provides an introduction to the fundamental aspects of the rational engineering approach to, and issues which influence, the design of ships and maritime structures. CAD skills as applied to ship design, including specific commercial modelling software are introduced.	
CREDITS: 3.00	

MAR 4002	Air Conditioning and Refrigeration
Introduction to air conditioning systems and refrigeration systems on board ships. The principles and theory of operation of typical equipment is covered. This includes equipment for hotel services as well as for cargo, such as refrigerated cargo, and refrigerated containers. Examples of applications of various types of equipment are given.	
CREDITS: 2.00	

MAR 4010	Marine Engineering Sea Time III
This course is the third of the seetime courses in this program. It is conducted at sea, and is supervised by a senior officer on board. A detailed record will be kept which will be assessed by HCT staff. The material will include: marine machinery operations; practical engineering knowledge; maintenance; watchkeeping; and practical control engineering.	
CREDITS: 10.00	

MAR 4102	Engineering Knowledge: Boilers
Covering the theory, design, operation and maintenance of marine boilers. It includes the safety issues associated with marine boilers, such as the need for a rigorous testing regime. Various boiler types, such as the scotch boiler, are included, along with applications and pros and cons. Issues associated with steam turbines are also included.	
CREDITS: 2.00	

MAR 4183	Engineering Knowledge: Diesel
Covering of the theory, design, operation and maintenance of marine diesel engines. Two and four stroke diesels are included, as are low speed, medium speed and high speed. Applications of each of these are given, along with the pros and cons of each. In addition, recent developments in diesel engines are covered. Dual fuel diesel/gas engines, and gas engines are also included.	
CREDITS: 3.00	

MAR 4223	Engineering Control II
Building on the previous control course and extends the knowledge of control theory and its application in the marine environment in a practical manner. In addition, specialist areas of control relevant to different pieces of shipboard equipment are considered, and the range of relevant control strategies examined.	
CREDITS: 2.00	

MAR 4233	Electrical Systems
Introducing the various electrical systems that are on board ships. It includes an introduction to a variety of bridge equipment such as: electronic navigational aids; sonar; meteorological equipment and instrumentation. Electrical cargo handling equipment, including: cranes; pumps; lifts; and ramps are covered. Electrical equipment in the accommodation and engine room are also included.	
CREDITS: 3.00	

MAR 4243	Material Technology
Covering the theory of marine materials in a greater depth. In particular, mild steel, and the various classifications of this are dealt with. Theoretical considerations of other materials used on board ships are also covered, including: high strength steel; stainless steel; aluminium; and fibreglass. The compatibility of different materials is covered, both from a point of view of corrosion and also from load bearing considerations.	
CREDITS: 3.00	

MAR 4263	Advanced Engineering Knowledge
Introduces an advanced course on marine engineering application and knowledge, which brings together all the earlier courses. This is covered in a capstone manner as required for the chief engineer on board a ship who needs to have a thorough understanding of all equipment and structure on the ship, and their interaction, both in routine situations and in emergencies.	
CREDITS: 3.00	

MAR 4273	Marine Machinery Operations
This is a capstone course which covers all operations of the wide range of marine machinery used on board ships from the view point of a chief engineer. It includes all the processes from start up to shut down, both in routine operations and under emergency conditions. Troubleshooting and other unusual operational scenarios are included.	
CREDITS: 3.00	

MAR 4313	Marine Control Systems
This is the capstone marine control course for chief engineers. The various control strategies used for a wide range of different marine engineering equipment	
both common and uncommon	

MAR 4423	Coastal Engineering and Maritime Structures
Introduction to the study of processes ongoing at the shoreline and within the coastal zone. Longshore and cross-shore currents are covered, including their effect on sand transport and beach erosion. It also covers the design of typical maritime coastal structures, including: breakwaters; groins; jetties; and sea walls.	
CREDITS: 3.00	

MAR 4433	Offshore Engineering
Introduction to offshore engineering, including the design of offshore platforms for oil and gas exploration and production. It will also include an introduction to subsea engineering, including subsea completions and pipelines on the seabed.	
CREDITS: 3.00	

MAR 4443	Ship Production II
Covers advanced ship production techniques, following on from MAR 3203, Ship Production. It focusses on efficient shipyard layout and ship production techniques, making use of international best practice, as applied in the UAE context. Economic aspects of ship production, and shipyard practices are also included, as well as project management, as applied to ship production.	
CREDITS: 3.00	

MAR 4453	Ship Repair
Focusing on ship repair techniques, including regular maintenance, following on from MAR 3203, Ship Production. Ashore and afloat techniques are included, and issues associated with both are discussed in detail. Project management techniques used for ship repair are also covered.	
CREDITS: 3.00	

MAR 4463	Port Engineering
Covering the planning and engineering of ports and harbours. Ship berthing and manoeuvring aspects are covered, including the need for, and the design of, navigation aids. Engineering issues associated with the design of different types of marine terminals (container, dry bulk, and liquid bulk, including gas) are included.	
CREDITS: 3.00	

MAR 4703	Shipping Management
Introduces the technical and operational aspects of ship management. The operations that are necessary to transport cargo in a safe, efficient, and commercially viable manner are included. Nautical, commercial and cargo operations are examined in detail. The course also examines the concepts which underpin ship operations, including: asset maintenance; quality management; and risk management.	
CREDITS: 3.00	

MAR 4803	Ship Structures II
Applying theories and concepts to describe and analyse the dynamic response of ship structures. Application of analytical models to the design of ship structures, and the use of simple and advanced methods to obtain internal forces and displacements, as well as buckling loads. An introduction to statistical predictions of wave-induced loads and hull girder response will also be covered. Load cases prescribed by Classification Societies, and the application of Classification Society rules to ship structures will be included.	
CREDITS: 3.00	

MAR 4805	Maritime Design Project I
This is the first of two related capstone design courses. The course consolidates the knowledge and capabilities developed during the previous years on the program, as applied to the design of a ship and associated machinery systems. It leads directly on to MAR 4862 in the following semester.	
CREDITS: 5.00	

MAR 4833	Seakeeping and Manoeuvring
Introduction to ocean waves; the prediction of ship motions in regular waves (both experimentally and numerically); and statistical approaches to assessing the motions of a ship in a seaway. Motions criteria are also covered. The course also includes an introduction to ship manoeuvring in open and in restricted water, including the concepts of ship-ship interaction.	
CREDITS: 3.00	

MAR 4853	Marine Surveying
Introduction to the principles of ship and engine surveying, as required by a marine surveyor. Issues associated with surveying for new build and/or repair in a shipyard are covered, as well as those associated with ongoing surveys, and port state control.	
CREDITS: 3.00	

MAR 4865	Maritime Design Project II
This is the second of two related capstone design courses, and follows on immediately from MAR 4802 in the previous semester. The course consolidates the knowledge and capabilities developed during the previous years on the program, as applied to the design of a ship and associated machinery systems.	
CREDITS: 5.00	

MAR 4883	Maritime Transportation
Introduction to the economic principles of commercial shipping practice. It includes the basics associated with ship ownership, ship chartering, and commercial ship operation. The principles of international trade, international commerce, the key trade routes, and the role of shipping in an integrated multi-modal supply chain are introduced.	
CREDITS: 3.00	

MAR 4903	Marine Safety
Covers the issues associated with marine safety, including the concepts of risk management, designing for safety, maritime safety regulations, and classifications societies. A number of case studies based on maritime accidents, and their subsequent effect on maritime regulations are discussed. Accident investigation procedures are also covered.	
CREDITS: 3.00	

MAS 1003	Introduction to Law
Building upon an earlier study of the law concept and principles, in particular the legal types of various laws, and the common law aspects and its relationship, and the substantive areas of constitutional law, the general theory of the rights and rights types, criminal law, and property. The course focuses on the application of laws of all UAE social and government life aspects of the law, Students will develop skills to critical legal thinking, and comparative approach law systems; understand methods of legal dispute settlement; and apply the appropriate law.	
CREDITS: 3.00	

MCE 2203	Applied Statics
Understand the fundamentals of statics for particles and rigid bodies with engineering applications. Use this understanding to analyze and solve problems in planar equilibrium and forces in structural members.	
CREDITS: 3.00	

MCE 2213	Mechanics of Materials
Understand, analyze and determine stress, strain, deformation, strain energy and load carrying capacity of structural members subjected to tension, compression, shear, torsion, bending and stress-strain transformation. Interpret engineering design concepts that are integrated into the course and conduct and analyze related laboratory experiments.	
CREDITS: 3.00	

MCE 2223	Applied Dynamics
Understand the fundamentals of dynamics with engineering applications. Use this understanding to analyze and solve problems in kinematics and kinetics for particles and rigid bodies.	
CREDITS: 3.00	

MCE 2303	Material Selection and Testing
Apply material selection criteria for specific engineering applications through the understanding and identification of materials, their mechanical properties and material defects. Explain atomic bonding, structure, imperfections, grain-size and re-crystallization and describe material failure and causes of corrosion with prevention methods.	
CREDITS: 3.00	

MCE 2311	Solid Modelling
Provides students with the fundamentals of 2D/3D CAD which are required for the development of mechanical engineering projects. Covers the steps involved in the process of designing 3D mechanical components and/or assemblies that is, modelling of solids with parametric capabilities, creation of assemblies, design validation and finally the creation of 2D engineering views. The learning methodologies are based on moments of exhibition of the defined syllabus and with several practical exercises using CAD software package.	
CREDITS: 1.00	

MCE 2323	Manufacturing Technology I
Introduces the concepts of basic manufacturing processes and fabrication techniques, such as metal casting, metal forming, sheet metal processes, manufacture of plastic components and metal joining processes.	
CREDITS: 3.00	

MCE 2332	Geometric Dimensioning and Tolerancing
This module will provide the basics of general tolerancing, symbols and terms used in geometric tolerancing, datum, material condition symbols, geometric characteristics and position tolerance.	
CREDITS: 2.00	

MCE 2403	Thermodynamics
Understand the first law of thermodynamics using heat transfer mechanisms, forms of mechanical work and the balance of energy; and apply to non-flow processes (closed systems) and flow processes (open systems). Determine thermos-physical properties of pure substances and ideal gases. Apply the second law of thermodynamics for thermal cycles.	
CREDITS: 3.00	

MCE 2903	Sophomore Design Project
Analyze, design and select engineering components and materials. Apply systematic design and design process techniques and implement them in real life practical design problems. Describe functions of common mechanical elements including flexible power transmission systems, keys and couplings, shafts, fasteners, welded joints and springs. Apply simple data and decision analysis techniques necessary to design these elements commonly found in mechanical systems. Execute what is learnt to complete the design of an engineering product or system.	
CREDITS: 3.00	

MCE 3203	Applied Mechanical Vibration
Understand and explain mechanical vibrations of single, two and multiple degree-of-freedom systems. Explain the principles of vibration control such as vibration isolation and vibration absorbers. Conduct experiments to demonstrate the basic principles of mechanical vibrations.	
CREDITS: 3.00	

MCE 3303	Manufacturing Technology II
To understand the concept and basic mechanics of metal cutting, working of standard machine tools such as lathe, milling, drilling and allied machines and grinding. To understand the basic concepts of Computer Numerical Control (CNC) of machine tools and CNC Programming.	
CREDITS: 3.00	

MCE 3343	Industrial Plant Maintenance
Maintenance of equipment in industries is very critical issue to ensure quality and quantity of production. Wear, corrosion, lubrication, preventive maintenance; decision tree to diagnose faults, important provisions of factory act, alignment of equipment etc. Basic knowledge and skills regarding maintenance problems, their causes and remedies in industries. Students will learn how to recognize troubles in mechanical elements, Assemble, dismantle and align mechanisms in sequential order and to carry out plant-maintenance using tribology, corrosion and preventive maintenance.	
CREDITS: 3.00	

MCE 3403	Fluid Mechanics
Covers the basic concepts of fluid mechanics. Emphasis will be placed on basic topics including fluid properties, hydrostatics and hydrodynamics (buoyancy, forces on submerged surfaces, pipe flow and energy losses). The course practical work will reinforce the theory through a set of experiments in the hydraulics laboratory.	
CREDITS: 3.00	

MCE 3413	Applied Heat Transfer
A study of the basic physical laws of heat transfer including steady-state and transient heat flow, one-dimensional heat conduction in solids, free or forced convection in fluids, radiation and phase change and analysis of heat exchangers. Understand engineering applications involving heat transfer in the design or selection of heat exchangers and building insulation materials.	
CREDITS: 3.00	

MCE 3503	Mechanical Design
Describe and categorize concepts and functions of various common mechanical elements including types of loading, flexible power transmission systems, keys and couplings, shafts, fasteners, welded joints and springs. Apply data and decision analysis techniques necessary to design these elements commonly found in mechanical devices and systems.	
CREDITS: 3.00	

MCE 3513	Machine Elements and Mechanisms
Designed to provide the concepts, procedures, data and decision analysis techniques necessary to design machine elements commonly found in mechanical devices and systems.	
CREDITS: 3.00	

MCE 3601	Engineering Measurements Lab
The laboratory introduces mechanical measurement techniques. Introduction to basic instrumentation used in mechanical engineering, including calibration, use, precision, and accuracy. Consideration of errors, precision, and accuracy in experimental measurements. Conducting experiments in force, torque, pressure, flow and temperatures.	
CREDITS: 1.00	

MCE 3613	Fluid Power
Explains the fundamental concepts of fluid power and electro-fluid power systems. Covers the principles of fluid power, calculations of velocity, flow, force, power of fluids and their ability to do work. Introduces the various fluid power components, symbols, circuits. Introduces troubleshooting of fluid power components and systems with an emphasis on safety. Addresses fluids, filters, reservoirs, piping, pumps, actuators, accumulators, and control valves.	
CREDITS: 3.00	

MCE 4303	Computer Integrated Manufacturing
To understand the application of computers in various aspects of Manufacturing, Design, Process planning, Manufacturing cost, Layout and Material Handling system.	
CREDITS: 3.00	

MCE 4313	Advanced Geometric Dimensioning and Tolerancing
Discusses major changes such as maximum material boundary, least material boundary, and regardless of material boundary. More complex GDandT situations, including datum feature modifiers, datum reference frames, form tolerances, orientation tolerances, profile and position tolerances will be covered in further detail. Coaxial tolerances, fixed and floating fastener formulas along with their application will be discussed.	
CREDITS: 3.00	

MCE 4323	Non Destructive Testing
To study and understand the various Non Destructive Evaluation and Testing methods, theory and their industrial applications. This course will demonstrate the difference between non-destructive testing and mechanical testing methods, testing techniques for surface, liquid dye penetration method, thermography, eddy current testing, ultrasonic testing, acoustic emission and radiography testing methodologies.	
CREDITS: 3.00	

MCE 4333	Production Planning and Control
To understand the various components and functions of production planning and control such as work study, product planning, process planning, production scheduling, Inventory Control. To know the recent trends like manufacturing requirement Planning (MRP II) and Enterprise Resource Planning (ERP).	
CREDITS: 3.00	

MCE 4403	Refrigeration and Air Conditioning System
Classify refrigeration and air-conditioning systems and their applications in industry. Analyze vapor compression refrigeration cycles, components, and systems. Describe simple vapor absorption systems. Study of psychometrics to determine the properties of moist air. Analyze air conditioning processes. Understand and apply cooling loads estimations. Study air distribution in air conditioning systems.	
CREDITS: 3.00	

MCE 4413	Turbomachinery
Understand the concepts, procedures, data and dimensional analysis techniques necessary to evaluate the flow and energy transfer through turbo machines. Understand and apply Euler's turbine equation to evaluate the energy transfer in a turbomachine. Study thermodynamics and fluid flow in turbomachines. Describe and analyze power-absorbing turbomachines such as axial-flow and radial flow compressors and centrifugal pumps. Describe and analyze power-producing machines such as axial flow steam and gas turbines.	
CREDITS: 3.00	

MCE 4423	Power Plant Engineering
Apply the laws of thermodynamics in the design and optimization of basic energy conversion processes within various power plants. Analyze fundamental thermodynamic properties including cycle efficiency. Also the concepts of nuclear power plants operation as well as economics of power plants are introduced.	
CREDITS: 3.00	

MCE 4433	Internal Combustion Engines
The course applies the thermodynamic cycles to the theory and analysis of reciprocation internal combustion engines, i.e. spark-ignition and compression-ignition engines. Study fuels, combustion, exhaust emissions and pollution, detonation, fuel injection, and factors affecting the performance of IC engines. Study heat transfer in internal combustion engines and lubrication; laboratory on variables that affect the performance of IC engines.	
CREDITS: 3.00	

MCE 4443	Computational Fluid Dynamics
An essential tool in analysis and design of thermal and fluid flow systems in a wide range of industries. Few prominent areas of applications of CFD include meteorology, transport systems (aerospace, automobile, high speed trains), energy systems, environment, electronics, bio-medical (design of life support and drug delivery systems), etc.	
CREDITS: 3.00	

MCE 4453	Desalination Engineering
Description of methods of water analysis and treatment. Study of properties of water and aqueous solutions. Detailed discussion and analysis of design, maintenance, energy requirements and economics of the major processes of desalination such as distillation, reverse osmosis, and electro-dialysis. Environmental, sustainability and economic factors which may influence the performance, affordability and more wide-spread use of desalination systems for fresh water production and reuse will be highlighted. Study of renewable energy technologies used in desalination.	
CREDITS: 3.00	

MCE 4463	Energy Conservation and Management
Study theoretical and practical concepts related to reduction of the energy consumption by implementing the most efficient commercial technologies available. Students will learn to understand and analyze energy data from industry, carryout energy accounting and balancing and utilize available resources in optimal ways and suggest methodologies to save energy. They will learn to consider the energy consumption on health, air pollution, global warming and other ecological systems.	
CREDITS: 3.00	

MCE 4503	Finite Element Analysis
finite element methods for the analysis of solid, structural and heat transfer problems. Steady-state, transient, and dynamic conditions are considered. Finite element methods and solution procedures for linear and nonlinear analysis are presented using largely physical arguments. The homework and group project involve use of the general purpose finite element analysis program. Applications include finite element analysis, modeling of problems, and interpretation of numerical results.	
CREDITS: 3.00	

MCE 4513	Integrated Design for Manufacture and Assembly
This course introduces and explains the concepts and technology of a modern product manufacturing environment shows how design and manufacturing are integrated within it. Also, it demonstrates the benefits and applications of computer technology in modern product and process manufacturing and design industries. In addition it facilitates the understanding of commercial demands on modern manufacturing where economical part manufacturing and assembly using modern tools and techniques are discussed.	
CREDITS: 3.00	

MCE 4603	Control Systems
This module introduces students to fundamental concepts in control system analysis and design. Topics include mathematical modeling of dynamical systems, time responses of first and second-order systems, steady-state error analysis, frequency response analysis of systems and design methodologies in both the time and the frequency domains.	
CREDITS: 3.00	

MCE 4613	Robotics and Automation
Introduction to robots as electromechanical systems, their main components and to different fields of robotics. Describe and analyze power sources, drives and transmissions used in industrial robotic structures, the construction of manipulators and grippers, their dynamics and force control. Understand various kinematics and inverse kinematics of robots. Describe and understand industrial sensors and switches and their use in manufacturing robots. Understand design, performance, and maintenance of assembly machines, transportation devices, feeding and orientation devices.	
CREDITS: 3.00	

MCE 4623	Introduction to Mechatronics
Mechatronics is an interdisciplinary area of engineering that combines mechanical, electrical, computer engineering and control systems. Modern products such as automobiles, washing machines, cameras, mobile phones, medical equipment, aircrafts, robots, autonomous systems, etc. are few examples of this category. This course focuses on fundamentals of microcontrollers, analog and digital electronics, sensors, actuators, drives and their applications to develop modern mechatronics systems and designs. Knowledge gained from lectures will be used to complete lab exercises.	
CREDITS: 3.00	

MCE 4863	Special Topics in Mechanical Engineering
Presents a theoretical or practical topic proposed by the faculty beyond what is offered in existing courses.	
CREDITS: 3.00	

MCE 4893	Directed Study
An investigation under faculty supervision beyond what is offered in existing courses.	
CREDITS: 3.00	

MCE 4902	Capstone Design Project I
Capstone final year design project requires the formation of a team to propose, plan and design an engineering product. The student team is totally responsible for the completion of the project milestones and course objectives while working under the mentorship of a faculty or industry engineer. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation schedule, and estimated cost.	
CREDITS: 2.00	

MCE 4912	Capstone Design Project II
Implement, evaluate, and analyze the capstone engineering project formerly proposed with Mechanical Design Project I. Though guided by faculty, the student team is primarily responsible for the completion of the project milestones and course objectives. Integrate and apply technological, organizational, communication, and interpersonal skills. Safe implementation, documentation, and presentation skills form the basis for assessment.	
CREDITS: 2.00	

MET 1113	Fabrication and Repair I
Introduction to workshop practices and the use of machine tools as relevant to seagoing marine engineers. The course also provides basic quality control checks of finished products. Material includes health, safety and environment regulations, and proper use of fabrication tools and regular logbook maintenance skills.	
CREDITS: 3.00	

MET 1122	Introduction to Marine Engineering
Introduction to marine engineering, designed for students undertaking the bachelor of Applied Science, Marine Engineering Program. This will include basic information on marine engineering and the relevant rules and regulations governing maritime operations, including classification societies and IMO.	
CREDITS: 2.00	

MET 1132	Marine Chemistry
Introduction to marine chemistry. It covers the properties of matter in terms of fundamental principles and provides the understanding of chemical energy concepts. In this course, the students will be introduced to gas law and kinetic theory of gases, spontaneity of reaction, chemical equilibrium, properties of solutions, and study the phenomena of liquid at interface. Attention is focused on applications of particular interest to the marine environment.	
CREDITS: 2.00	

MET 1210	Marine Engineering Seetime I
Undertaken under the supervision of a senior officer while the student is at sea. A detailed record of tasks and duties performed under the direction of ships officers will be kept in a training record book, dated and signed by the supervising officers. This Training Record Book together with a number of project work and assignments will be assessed for completion by HCT staff at the end of the semester. The material will include: use of hand tools; watchkeeping; electrical systems; auxiliary equipment; and maintenance.	
CREDITS: 10.00	

MET 2303	Mathematics for Marine Engineering
First year mathematics course. It provides the student with background mathematical skills essential for progression to the study of calculus and further engineering mathematics. Topics include polynomials, linear algebra, vectors, complex numbers, exponential and logarithmic functions, variation and inequalities.	
CREDITS: 3.00	

MET 2313	Marine Engineering Knowledge
Introduction to the theories and principles of a very wide range of marine engineering equipment, including: main engines (different types); auxiliary engines; marine boilers; shafts; seals; tanks (fresh water, ballast, and cargo); valves; air conditioning equipment; refrigeration equipment; pumps (different types); steering gear; stabilizers; and scrubbers.	
CREDITS: 3.00	

MET 2403	Fluid Mechanics for Marine Engineering
Covers the basic concepts of fluid mechanics. Emphasis will be placed on basic topics including fluid properties, hydrostatics and hydrodynamics (buoyancy, forces on submerged surfaces, pipe flow and energy losses). The course practical work will reinforce the theory through a set of experiments in the hydraulics laboratory.	
CREDITS: 3.00	

MET 2413	Applied Marine Mechanics I
Basic theory and operation of two and four-stroke marine engines (inboard, outboard and jet) as well as common boat hull types and boating terminology.	
CREDITS: 3.00	

MET 2423	Ship Stability
This course covers the basic stability of ships to enable seagoing officers to understand issues associated with loading, unloading and moving of cargo and related aspects. It includes transverse stability (small angle and large angle), free surface effects, list and loll angles, and trim. The concept of the trim and stability booklet is introduced, and its application explained, such that students can make use of it to carry out basic stability and trim calculations.	
CREDITS: 3.00	

MET 2433	Fabrication and Repair II
Builds upon the fabrication and repair course in first semester, together with the experience that the cadets will have obtained during their first period of seetime. It covers more advanced fabrication techniques, including the construction of a more elaborate example piece. Health and safety issues continue to be emphasized.	
CREDITS: 3.00	

MET 2442	Marine Material Technology I
Introduction to the wide range of materials used in the maritime environment. It covers: mild steel; stainless steel; aluminium; concrete; wood; and glass reinforced plastic. The particular issues with each of these for the maritime environment are discussed, and applications for each included. In addition, the particular properties of the wide range of different mild steels is discussed in detail.	
CREDITS: 2.00	

MET 3510	Marine Engineering Seetime II
Second of the seetime courses in this program. It will be conducted at sea, and will be supervised by a senior officer on board. A detailed record of tasks and duties performed under the direction of ships officers will be kept in a training record book, dated and signed by the supervising officers. This Training Record Book (TRB) together with a number of project work and assignments will be assessed for completion by HCT staff at the end of the semester.	
CREDITS: 10.00	

MET 3603	Applied Marine Mechanics II
Electrical theory, mechanical theory, fuel systems, ignition systems, rigging and propping, maintenance, and off season storage.	
CREDITS: 3.00	

MET 3613	Ship Construction
Introduction to the concepts and principles of naval architecture and ship construction. It covers practical aspects of ship design, including the purpose and names of important elements of a ship. Different ship types, the reasons for these and their principal design differences are covered. These include: general cargo vessels; dry bulk carriers; oil tankers; gas carriers; containerships; cruise ships; passenger ships; ferries; tugs; supply boats, other support vessels; and warships.	
CREDITS: 3.00	

MET 3623	Marine Engineering Control I
Introduction to the basic applications of automatic control theory and the use of these concepts in a wide variety of different marine applications. Different concepts of control theory are considered, and their applications on board ships discussed. Typical control hardware is studied, and examples given.	
CREDITS: 3.00	

MET 3633	Marine Electrical Systems I
Introduction to the fundamentals of common electrical machines used in maritime environments. The physical concepts and basic laws governing electrical machine operation are introduced, and the principles underlying the performance of electrical machines are explained. In addition, the course covers power transformation and transmission in ships. A number of shipboard applications are given.	
CREDITS: 3.00	

MET 3643	Diesel Engine Maintenance
Comprehensive introduction to the maintenance of diesel engines in the maritime environment. Typical large low speed two stroke diesel engines are included, as well as smaller high and medium speed diesel engines. In addition to routine maintenance, troubleshooting issues are included.	
CREDITS: 3.00	

MET 4710	Marine Engineering Seetime III
Third of the seetime courses in this program. This course will be undertaken under the supervision of a senior officer while the student is at sea. A detailed record of tasks and duties performed under the direction of ships officers will be kept in a training record book, dated and signed by the supervising officers. This Training Record Book together with a number of project work and assignments will be assessed for completion by HCT staff at the end of the semester.	
CREDITS: 10.00	

MET 4804	Engineering Knowledge - Diesel
Covers the theory, design, operation and maintenance of marine diesel engines. Two and four stroke diesels are included, as are low speed, medium speed and high speed. Applications of each of these are given, along with the pros and cons of each. In addition, recent developments in diesel engines are covered. Dual fuel diesel/gas engines, and gas engines are also included.	
CREDITS: 4.00	

MET 4814	Engineering Knowledge - Steam
Emphasis on understanding the basic principles of operation of steam machinery with special emphasis on safe and efficient operational practices.	
CREDITS: 4.00	
MET 4823	Marine Airconditioning and Refrigeration
Introduction to air conditioning systems and refrigeration systems on board ships. The principles and theory of operation of typical equipment is covered. This includes equipment for hotel services as well as for cargo, such as refrigerated cargo, and refrigerated containers. Examples of applications of various types of equipment are given.	
CREDITS: 3.00	
MET 4833	Marine Engineering Control II
Builds on the previous control course and extends the knowledge of control theory and its application in the marine environment in a practical manner. In addition, specialist areas of control relevant to different pieces of shipboard equipment are considered, and the range of relevant control strategies examined.	
CREDITS: 3.00	
MET 4843	Marine Electrical Systems II
Introduction to the various electrical systems that are on board ships. It includes an introduction to a variety of bridge equipment such as: electronic navigational aids; sonar; meteorological equipment and instrumentation. Electrical cargo handling equipment, including: cranes; pumps; lifts; and ramps are covered. Electrical equipment in the accommodation and engine room are also included.	
CREDITS: 3.00	
MET 5005	Leadership for Chief Engineers
Prepare students for the position as Chief Engineer. The requirements of a chief engineer are covered, along with various leadership strategies to best meet the challenges of leading a diverse group of officers and crew on a ship. In addition, the differences between shipboard command and senior leadership positions ashore are discussed. In addition to routine operations, the leadership skills and techniques to be employed in a variety of on board emergency situations are covered.	
CREDITS: 5.00	
MET 5014	Marine Machinery Operations
Capstone course which covers all operations of the wide range of marine machinery used on board ships from the view point of a chief engineer. It includes all the processes from start up to shut down, both in routine operations and under emergency conditions. Troubleshooting and other unusual operational scenarios are included.	
CREDITS: 4.00	
MET 5024	Advanced Ship Regulation and Survey
Regulations concerning the construction of passenger ships, cargo ships and barges. Conduct a ship survey with effectiveness and efficiency. Essential law, safety and operational surveys, incident and accident investigation along with writing the survey report and flag and port state control inspections.	
CREDITS: 4.00	

MET 5903	Marine Material Technology II
Covers the theory of marine materials in a greater depth. In particular, mild steel, and the various classifications of this are dealt with. Theoretical considerations of other materials used on board ships are also covered, including: high strength steel; stainless steel; aluminium; and fibreglass. The compatibility of different materials is covered, both from a point of view of corrosion and also from load bearing considerations.	
CREDITS: 3.00	
MET 5914	Ship Design and Technology
Covers a range of technical topics, building on knowledge gained earlier in the program, associated with the design and construction of different vessel types, including: general cargo vessels; dry bulk carriers; oil tankers; gas carriers; container ships; cruise ships; passenger ships; ferries; tugs; supply boats; other support vessels; and warships.	
CREDITS: 4.00	
MET 5924	Advanced Marine Engineering Knowledge
Advanced course on marine engineering application and knowledge, which brings together all the earlier courses. This is covered in a capstone manner as required for the chief engineer on board a ship who needs to have a thorough understanding of all equipment and structure on the ship, and their interaction, both in routine situations and in emergencies. An introduction to project management is also included.	
CREDITS: 4.00	
MET 5934	Marine Engineering Project
First of two linked project based final year courses. An appropriate project will be chosen by the student with guidance from relevant faculty members. Conducting the project will integrate many of the skills and knowledge obtained during the program, as well as develop independent learning. Students are expected to submit, and defend, their project in the presence of faculty members, and their peers.	
CREDITS: 4.00	
MGT 1003	Principles of Management
Students gain an understanding of the concept of leadership and management as understood by practicing managers and behavioral scientists. Learn the basic functions of management, management levels and skills, model of communication, individual and group decision making, role of leaders in managing change, leadership theory, concepts and practical issues related to both the UAE and the wider business environment.	
CREDITS: 3.00	
MGT 2103	Organizational Behavior
Deals in a more detailed manner with a range of occupational and organizational issues such as leadership style, motivation, rewards systems, job design, employee performance, worker health and well-being, including aspects related to power and politics at work. It also looks at organizational culture, diversity, equity, and organizational structures that allow companies to gain sustainable competitive advantage.	
CREDITS: 3.00	

MGT 3003	Business Ethics and Corporate Governance
Develops the ability to critically evaluate business issues that are ethically ambiguous or contain ethical dilemmas. Ethical theories, ethical concepts, relationships between stakeholders, professional ethics and sustainability are studied in relation to the world of work. Corporate social responsibility (CSR) and corporate governance (CG) principles are studied and applied from local and international business perspectives.	
CREDITS: 3.00	

MGT 3103	Strategic Management and Simulation
Primarily through the use of topical case studies, it analyses the nature of competitive advantage, and the various strategies available for firms to develop sustainable business growth in a global environment. The course features a complex business simulation game in which students demonstrate a series of inter-related decisions, their ability to apply business administration concepts in practice, for the benefit of an imaginary company.	
CREDITS: 3.00	

MGT 4043	Management Science
Develop an understanding of the quantitative techniques and tools to resolve managerial decision problems related to resource allocation, optimization, process management and decision analysis problems in organizations. Apply linear programming, simulation modelling, network modelling and decision analysis tools to complex quality management processes using specialized software.	
CREDITS: 3.00	

MRK 1103	Principles of Marketing
Introduces the basic concepts of Marketing, develops an understanding of the overall process of marketing including the research, planning, implementation and control of marketing activities in the contemporary business environment. The main emphasis is on the practical application of marketing concepts covered in the course, using UAE consumer products as examples.	
CREDITS: 3.00	

MRK 2003	Consumer Behaviour
Principles of Marketing: Relates the theory of consumer behaviour to the practice of marketing. Drawing from psychology and the social and behavioural sciences students will learn about the consumer decision making processes and its influencing factors.	
CREDITS: 3.00	

MRK 2103	Marketing Metrics
Marketing metrics are numeric data that allow marketers to evaluate their performance against organizational goals. Students develop competencies in the application of marketing concepts and methods in the design, evaluation, and implementation of marketing strategy. Students will acquire specific set of core marketing metric skills and competencies to evaluate marketing investment performance and make recommendation from completing set of alternatives to add to firm value.	
CREDITS: 3.00	

MRK 3003	Integrated Marketing Communications
Introduces the fundamental principles of Integrated Marketing Communications (IMC). Describes and applies the IMC planning process leading to consistent communications strategy of a brand. Develops an understanding of a range of traditional communication tools as well as digital media. Creates the necessary skills to apply the various communications elements to a brand. Judges the effectiveness of the IMC plan and generates recommendations.	
CREDITS: 3.00	

MRK 3013	Marketing Research
The ability to effectively plan and manage market research projects as well as conduct basic data analysis is crucial for working effectively in the business world. The course provides a practical understanding of how market research is conducted and managed. Covers the stages of marketing research ? from problem definition to the reporting of results ? with a particular focus on learning how to use the most common market research tools.	
CREDITS: 3.00	

MRK 3103	Brand Management
Students explore the issues and challenges commonly faced by brand managers. Topics include an introduction to brands and brand management, identifying and establishing brand positioning and values, planning and implementing brand marketing programs, measuring and interpreting brand equity, and growing and sustaining brand equity. The course equips students with the theoretical and practical knowledge necessary for successful brand management.	
CREDITS: 3.00	

MRK 3113	Digital Marketing
Digital marketing is a rapidly changing field. New media marketing, including social, mobile, and search, is revolutionizing how marketers operate and the skills they need to be successful. Students will explore the power of applying digital concepts across marketing functions and how digital marketing is becoming a driver of marketing strategy.	
CREDITS: 3.00	

MRK 4003	International Marketing Management
Develops understanding of how international marketing enhances the global competitiveness of a business. Through the analysis and evaluation of factors explains how marketing makes a business more competitive in dynamic global markets. International marketing principles are applied to product, service and country specific situations. Marketing skills and plans that are required for a business to strategically move into a foreign country are developed.	
CREDITS: 3.00	

MRK 4013	Strategic Marketing
Highlights the impact of contemporary issues on marketing management planning, and strategy formulation within a complex business environment. Encouraged to critically evaluate the implications of specific decisions and assess various options in making strategic marketing decisions. Through innovative marketing solutions, in relation to brand and market development, recommend strategic developments to enhance competitive advantage and positioning in relation to fluctuating consumer behaviors.	
CREDITS: 3.00	

MRK 4023	Customer Relationship Management
Covers the fundamental concepts and the usefulness of customer relationship management (CRM) and its associated methods. Focuses on CRM's application in marketing, sales, and service. Effective CRM strategies help companies align business process with customer centric strategies using people, technology, and knowledge. Explores the benefits of creating customer loyalty, developing market intelligence and embedding a customer relationship management system into an organization.	
CREDITS: 3.00	

MRK 4033	Digital Tools and Techniques
According to the framework of the Digital Marketing Institute (DMI) successful digital marketing campaigns start with the customer and work backwards. Students will explore how consumers can exercise more control over their choices, and how this can help organizations to build and implement more effective campaigns by real customer interaction.	
CREDITS: 3.00	

MRK 4103	Services Marketing
Students learn about the nature of services and the challenges in marketing services (locally and globally). The student explores and uses the services marketing mix. The services marketing course explores how business organizations can deliver efficient service. In addition, key concepts in measuring service are defined and the student creates recommendations for service managers.	
CREDITS: 3.00	

MRK 4113	Data Driven B2B Marketing
Provides a practical understanding of what Data-driven B2B marketing is and how it is applied. Covers how and why to build a B2B marketing database, how to source data and use it, and how to manage that data. The key applications that generate business value are covered as well in this course. The ability to successfully build and use a marketing database is crucial for business intelligence, business opportunity, marketing communications and customer retention.	
CREDITS: 3.00	

MRK 4123	Social Media and Mobile Marketing
Mobile is a fast growing area of digital marketing. Leading brands often design for mobile first and desktop second. Students learn a range of skills needed to become a mobile marketing specialist, and will design a targeted digital marketing plan in the mobile context. The course applies the four zones of Social Media Marketing to a brand. It defines the Social Media Marketing planning process and how it fits the overall organizational planning. Develops an understanding of consumers, and of how segmentation and targeting of consumers has changed with the use of social media.	
CREDITS: 3.00	

MRK 4203	Marketing Research Project
Provides students with the resources to apply the research skills from previous courses as a framework for a final industry-based research project for the Quality Management major. The final industry research project encourages students to identify and address learning outcomes across major. The purpose is to integrate previously taught stand-alone courses in order to identify opportunities for the application and critical review of theory and practice in a business environment.	
CREDITS: 3.00	

MTE 2403	Thermofluid Systems
Understand thermo-fluid systems which involves the energy transfer and its conversion through fluids, using the principles of fluid mechanics and thermodynamics. Apply the continuity principle and energy conservation law to non-compressible steady flow processes and to solve energy balance problems for closed systems and open systems. Obtain properties of pure substances and ideal gases through the application of the ideal gas equation of state, property diagrams and the use of tables.	
CREDITS: 3.00	

MTE 2602	Mechatronics Measurements and Troubleshooting
This course enables the Mechatronics engineers to understand measurement techniques of the common industrial variables (plant parameters), naming pressure, flow, temperature, linear displacement, etc., and evaluate different sensors/transducers for proper control action. This course also covers troubleshooting of mechatronic systems in industrial settings.	
CREDITS: 2.00	

MTE 2903	Sophomore Design Project
Within a team, propose, design, plan and implement a capstone engineering project. Though mentored by a faculty member, the team is evaluated on its ability to coordinate efforts to propose the project design criteria, major components, resources, systematic design, implementation schedule, and estimated cost. Some element of simulation is encouraged. Integrate and apply technological, organizational, communication, and interpersonal skills for safe implementation, documentation, and presentation skills.	
CREDITS: 3.00	

MTE 3503	Electronics Product Design
Introduce students to computer aided circuit design and more specifically with CAD tools, since technological advances have allowed the design, construction and control of complex electrical and electronic circuits that cannot be designed with traditional methods. Familiarize students with CAD tools while using the theoretical background of circuit design that was provided in the prerequisite courses of Electric Circuits and Digital Circuits.	
CREDITS: 3.00	

MTE 3603	Electronics Systems and Circuits
The application of digital and linear semiconductor devices Basic combinational and sequential circuits including minimization techniques. In the linear circuits, students will study operational amplifiers characteristics and their applications. In the laboratory part of this course, students will build and test combinational logic circuits, sequential logic circuits and analog circuit applications using diodes, thyristors, BJT, JFET, and MOSFET. Student will also build control circuits utilizing operational amplifiers.	
CREDITS: 3.00	

MTE 3611	Electronics Systems and Circuits Lab
The laboratory work for the MTE 3603, and in this course students will build and test combinational logic circuits, sequential logic circuits and analog circuit applications using diodes, thyristors, BJT, JFET, and MOSFET. Student will also build control circuits utilizing operational amplifiers. Most of the work will be performed utilizing Simulation Software, prototyping kits and testing instruments. Students will also learn Technical report writing.	
CREDITS: 1.00	

MTE 3623	Microcontroller Systems
<p>Introductory course to the concepts and practices of microcontroller based kits and their application to the control of electromechanical devices and systems. The hardware and software architecture of a typical microcontroller based kit is described and used as a basis for the implementation of programs and interfacing. Top-down design is applied to implement solutions using on-board peripherals, and various modules for a selected range of applications. Practical laboratories and mini-projects are utilized to reinforce concepts.</p>	
CREDITS: 3.00	

MTE 3633	Sensors and Actuators
<p>Sensors and Actuators are an integral parts of Industrial machines and automation systems. Programmable logic controller, coupled with sensors and actuators will be introduced and applied. Sensors: analog and digital motion sensors, optical sensors, temperature sensors, magnetic and electromagnetic sensors, torque, force and tactile sensors. Actuators: stepper motors, DC and AC motors, hydraulic and pneumatic actuators, magnet and electromagnetic actuators.</p>	
CREDITS: 3.00	

MTE 4503	Design of Mechatronic Systems
<p>The conception of mechatronics systems arises from the integration of knowledge from different areas of Engineering Technology disciplines and components: Electronics, Mechanical, PLC and computer Control, Pneumatics, Hydraulics, sensors and Actuators. The arrangement of these components ensures their function; specifically in terms of their reliability and reasonable costs. Designing of mechatronic systems needs therefore to start from functions and only then to decide which configuration of components and technologies would be the most appropriate for accomplishment.</p>	
CREDITS: 3.00	

MTE 4603	Robotics Technology
<p>Robotic technology involves mechanical components, transducers, and actuators of a computer automated process. Specifically, a hands-on approach is used to explore robotic embedded systems, associated programming, dedicated controllers, and related applications. The fundamental concepts describing robotics operation including coordinate transformations, sensor and actuator selection and interface, motion analysis, path planning and kinematics are introduced.</p>	
CREDITS: 3.00	

MTE 4613	Industrial Control Systems
<p>Understand the fundamental systems and concepts of computer control with application to modern industry and manufacturing. Describe control system layout, components, various network topologies and protocols. Model, simulate by MATLAB, and analyze the response of a specified, closed-loop, computer-controlled, control system. Design and implement a computer-controlled system using appropriate hardware and software components.</p>	
CREDITS: 3.00	

MTE 4623	Industrial Automation
<p>Course introduces students to the utilization of basic control systems such as hydraulics and pneumatics motion controllers, PLCs programmable controllers, sensors and vision systems, robotics to design a computer integrated manufacturing (CIM) cell. This is a hands-on, team based, course to give students the basic concepts needed to design manufacturing automation systems using both hard automation and robots used in a CIM cell high-end automation system.</p>	
CREDITS: 3.00	

MTE 4633	Process Control
<p>Introduce the key concepts in automatic control and instrumentation of process plants, including control diagrams, symbols, concepts, and operation of industrial based control systems in a modern automated environment, and described by practical industrial applications. Several types of industrial control systems are presented including supervisory control and data acquisition systems, distributed control systems and programmable logic controllers.</p>	
CREDITS: 3.00	

MTE 4643	Digital Control Systems
<p>Presents topics related to digital control systems and includes the components of computer control systems, design and analysis of digital controllers, and typical industrial applications with a distributed control system. The course includes realization of digital control systems, distributed control system architecture, and practical implementation of a simple distributed control system.</p>	
CREDITS: 3.00	

MTE 4653	Real Time Embedded Systems
<p>Teach the concepts and skills necessary to program embedded systems and build basic projects using a microcontroller based kit. Topics will cover hardware level programming in high level language, interfacing on-board peripherals, digital and analog I/O, and bus communication. Real time operating system concepts pertaining to embedded systems are discussed. Hands-on experience completing small hardware projects using microcontroller based kit is emphasized. Students will find the topics of this course useful if they plan to use a microcontroller in their capstone design projects.</p>	
CREDITS: 3.00	

MTE 4863	Special Topics in Mechatronics Engineering
<p>Presents a theoretical or practical topic proposed by the faculty beyond what is offered in existing courses.</p>	
CREDITS: 3.00	

MTE 4893	Directed Study
<p>An investigation under faculty supervision beyond what is offered in existing courses.</p>	
CREDITS: 3.00	

MTE 4902	Capstone Design Project I
<p>Involves the proposal, design, and planning a capstone engineering project. Understand and describe common industrial procedures for employee health, safety and environment. Hazards identification and control, occupational health, fire protection and prevention, safety management and ethics, safety regulations, safety inspection, accident investigation, personal protective equipment should be covered, and safety report documentation. Discuss environment protection, accident prevention, effective committee operations, accident investigation, and safety training.</p>	
CREDITS: 2.00	

MTE 4912	Capstone Design Project II
Implementation, evaluation, and analysis of the capstone engineering project formerly proposed with Design Project I will take place. Integrate and apply technological, organizational, communication, and interpersonal skills for safe implementation, documentation, and presentation skills. The course also includes health, safety and environment report documentation discussing environment protection, accident prevention, effective committee operations, accident investigation and safe working practice for artifact fabrication to form the basis for assessment.	
CREDITS: 2.00	

MTH 1103	Pre Calculus
Provides the student with background mathematical skills essential for progression to the study of calculus and further higher mathematics courses. Topics include functions, linear functions, exponential and logarithmic functions, transformation of functions, trigonometric functions, composite inverse and combination of functions, polynomial and rational functions, and complex numbers. A free multi-platform dynamic mathematics software as Geo-Gebra is used to allow students to visualize and manipulate various problems.	
CREDITS: 3.00	

MTH 1113	Statistics for Engineering
A standard approach to statistical analysis mainly for engineering students. Understand: Basic statistical concepts; graphs; basics probability; discrete distribution; expectations; Binomial and Normal distributions with their applications. Point and Confidence interval estimations; testing hypotheses; regression and correlation.	
CREDITS: 3.00	

MTH 1203	Calculus I
Apply the concepts of trigonometry and algebra to determine limits and establish continuity for an equation. Calculate the derivative of algebraic, trigonometric, logarithmic and exponential functions. Apply the derivative to optimisation of problems. Determine the maxima and minima of a function. Create graphs to solve problems.	
CREDITS: 3.00	

MTH 1213	Mathematics for Marine Engineering I
Provides the student with background mathematical skills essential for progression to the study of calculus and further engineering mathematics. Topics include polynomials, linear algebra, vectors, complex numbers, exponential and logarithmic functions, variation and inequalities.	
CREDITS: 3.00	

MTH 1223	Mathematics for Marine Engineering II
Introduces Calculus Mathematics and associated applications. The course includes Limits and Continuity, Differentiation of Algebraic Functions, Trigonometric Functions, Logarithmic, Exponential Functions, Applications of the Derivative, Optimization and Newton's Method.	
CREDITS: 3.00	

MTH 1233	Mathematics for Marine Engineering III
Introduces systems of linear equations, matrices, and first order differential equations; existence and uniqueness; second order differential equations; Laplace transform and its use in solving differential equations; and simple partial differential equations. This course introduces systems of linear equations and matrices, Gaussian elimination, matrix operation, inverse, linear transformation, Eigen values and Eigen vectors.	
CREDITS: 3.00	

MTH 2103	Calculus II
Apply Integral Calculus and associated applications to solve engineering problems. Determine the sums, indefinite and definite integrals, integration techniques, parametric equations and polar coordinates, application of integration, and an introduction to numerical integration techniques.	
CREDITS: 3.00	

MTH 2503	Linear Algebra and Differential Equations
Solve systems of linear equations, matrices, and first order differential equations; existence and uniqueness; second order differential equations; Laplace transform and its use in differential equations; and simple partial differential equations. The systems of linear equations and matrices, Gaussian elimination, matrix operation, inverse, linear transformation, Eigen values and Eigen vectors are applied to appropriate equations.	
CREDITS: 3.00	

MTH 3013	Calculus III
Apply hyperbolic functions and their inverse to solve complex functions. Solve problems requiring Taylor, Maclaurin and Fourier series, operations with vectors dot and cross products, lines and planes. Functions of several variables, partial derivatives, double and triple integrals, moments, center of mass, volumes, double integrals in polar forms, triple integrals in cylindrical and spherical coordinates, line integrals and Green's theorem are also covered.	
CREDITS: 3.00	

MTR 1013	Fundamentals of Marine Navigation
This course introduces marine navigation concepts to students and includes the fundamentals of coastal and ocean navigation. It provides the student with the skills and knowledge to plot positions to a level appropriate in order for him to be able to assist the officer of the watch in the safe navigation of the vessel. It meets the competency standards stipulated in Table A-II/1 of STCW Convention.	
CREDITS: 3.00	

MTR 1023	Maritime Industry Overview
This course introduces the maritime industry to students with emphasis on the shipping sector. It includes introduction to maritime organisations, vessel design and categorisation, vessel operations, and rules and regulations governing shipboard operations. It meets the competency standards stipulated in Table A-II/1 of STCW Convention.	
CREDITS: 3.00	

MTR 1033	Nautical Knowledge
Aimed at those who are yet to work on board vessels. It provides basic seamanship and shipboard communication skills and introduces concepts of safe watchkeeping to students so that they could play a supporting role to the officer of the watch during their seagoing training period. This course meets the competency standards stipulated in Table A-II/1 of STCW Convention.	
CREDITS: 3.00	

MTR 1210	Shipboard Support - Level Experience
Provides the opportunity to students to undertake training at sea under the supervision of an officer on board the vessel. A detailed record of learning will be kept which will be assessed by HCT staff. The material will include Shipboard Familiarisation, Seamanship, Equipment, Watchkeeping, Navigation, and Ship Knowledge.	
CREDITS: 10.00	

MTR 2003	Marine Physical Science
On completion of this course, the student will have gained the knowledge of the physical science principles which determine the behaviour of a ship in relation to its design, load condition and the environment in which it operates and, the operation of shipboard equipment.	
CREDITS: 3.00	

MTR 2012	Shipboard Operational Leadership
Provides students with the knowledge, skills of leadership and teamwork at the operational level on board a ship. It meets the competency standards stipulated in Table A-II/1 of STCW Convention and the requirements of IMO Model Course 1.39: Leadership and Teamwork	
CREDITS: 2.00	

MTR 2102	Ship Regulation and Survey
Provides the students with a working knowledge of the laws and regulations that govern the shipboard safety and routine and emergency operations with particular emphasis on ships survey and inspection. Meets the competency standards stipulated in Table A-II/1 of STCW Convention.	
CREDITS: 2.00	

MTR 2103	Ship Operational Safety
This will provide students with skills and knowledge required to carry-out routine shipboard operations and respond promptly and correctly to emergencies in a manner that ensures safety of personnel, the ship structure and equipment, and the marine environment, adhering to the International Safety Management (ISM) principles and procedures.	
CREDITS: 3.00	

MTR 2203	Near - Coastal Navigation
Equips students with the skills and knowledge required to plan and conduct a safe navigational passage and, to determine the vessel's position and plot it on a navigational chart. Builds on the knowledge gained in MTR 1013 Fundamentals of Marine Navigation and meets the competency standards stipulated in Table A-II/1 of STCW Convention.	
CREDITS: 3.00	

MTR 2303	Ship Characteristics and Maintenance
Provides the student with an insight into vessel design, and aims to build on the knowledge gained from MTR 1123 Maritime Industry Overview. It covers practical aspects of vessel design, including purpose of key features, vessel types and their principal design differences, and the function of machinery. The course also includes shipboard repair and planned maintenance procedures.	
CREDITS: 3.00	

MTR 2314	Marine Navigational Watchkeeping
Integrates watchkeeping theory and case studies with practical application and problem solving exercises involving the use of the marine simulator. It builds on the knowledge gained in MTR 1033 Nautical Knowledge and MTR 1210 Shipboard Support-Level Experience, and meets the competency standards stipulated in Table A-II/1 of STCW Convention.	
CREDITS: 4.00	

MTR 2324	Marine Electronic Navigation
Provides the students with the knowledge skills and required to safely maintain a navigational watch through use of various electronic navigation systems on a vessel. The course meets the competency standards stipulated in Table A-II/1 of STCW Convention.	
CREDITS: 4.00	

MTR 2332	Ship Manoeuvring and Control
Provides the students with the knowledge and skills required to control a power driven vessel as officer of the watch, including basic handling and manoeuvring of the vessel under normal operations when berthing, mooring and anchoring. Builds on the knowledge gained in year 1 and meets the competency standards stipulated in Table A-II/1 of STCW Convention.	
CREDITS: 2.00	

MTR 3010	Shipboard Operational - Level Experience
Undertaken under the supervision of the shipboard training officer while the student is at sea. A detailed record of tasks undertaken and duties performed under the direction of ships officers will be kept in a training record book (TRB), dated and signed by the supervising officers. This TRB together with a number of project work and assignments will be assessed for completion by HCT staff at the end of the following semester. The TRB covers Seamanship, Equipment, Watchkeeping Practice, Navigation, and Cargo Operations.	
CREDITS: 10.00	

MTR 3013	Marine Weather Watchkeeping
Provides students with a comprehension of the weather systems encountered at sea and with skills and knowledge required to observe, interpret and record the state of the marine environment, and use this information for safe navigation and care of cargo. Building upon the knowledge gained in MTR 1033 Nautical Knowledge and meeting the competency standards stipulated in Table A-II/1 of STCW Convention.	
CREDITS: 3.00	

MTR 3023	Marine Transport Operations
Provides the students with the skills and knowledge required to supervise the safe handling, stowage and carriage of cargoes including dangerous goods and the care of passengers on board a variety of vessels, in accordance with the international regulations and best practice.	
CREDITS: 3.00	
MTR 3033	Electronic Chart Display and Information System (ECDIS)
Provides the students with the knowledge and skills necessary to fully utilise the features of ECDIS in order to enhance safety of navigation. Meets the competency standards stipulated in Table A-II/1 of STCW Convention and IMO Model Course 1.27 The Operational Use of ECDIS.	
CREDITS: 3.00	
MTR 3103	Ship Stability and Stress
Provides knowledge and skills to identify basic stability issues of vessels associated with loading and unloading and moving of weights. Builds on the knowledge gained in 'MTR 1023 Maritime Industry Overview' and, meets the competency standards stipulated in Table A-II/1 of STCW Convention.	
CREDITS: 3.00	
MTR 3113	Ocean Navigation
Provides the student with skills and knowledge required to determine courses and distances on the earth's surface including in higher latitudes and to fix the vessel's position by observation of celestial bodies. It meets the competency standards stipulated in Table A-II/1 of STCW Convention.	
CREDITS: 3.00	
MTR 4010	Shipboard Management-Level Experience
Prepare the student undertake the STCW Management-Level studies in Year 4 and 5. Delivered under the supervision of the shipboard training officer while the student is at sea. Meets the requirements of the STCW Convention for the training of deck officers at Management Level.	
CREDITS: 10.00	
MTR 4024	Leadership in Shipboard Management
Provides the students with knowledge and skills that a senior officer requires to organise the efficient running of a merchant ship, with emphasis in leading and managing multicultural crews and maintaining an effective interface with other industry stakeholders. Includes the concept of leadership; and the importance of vision, motivation and communication. Selected leadership theories and styles are included and examples which apply to senior officers at sea given.	
CREDITS: 4.00	
MTR 4114	Marine Environmental Dynamics
Provides the students with the knowledge and skills to be able to forecast weather and sea conditions with particular emphasis on avoidance of potentially dangerous weather conditions and formulate reasoned questions concerning environmental and climate issues. Expands on the basic concepts of meteorology introduced in MAR 2603 Marine Weather Watchkeeping and, meets the competency standards stipulated in Table A-II/2 of STCW Convention.	
CREDITS: 4.00	

MTR 4124	Advanced Techniques in Marine Navigation
Concepts and principles underlying various methods of position fixing, and evaluation of the quality of position fixes are covered. Encompasses the study of different models of the shape of the earth, the understanding of nautical astronomy, use of information to predict tidal heights and times and in-depth study of errors and limitations of the ship's compasses, and an introduction to statistics.	
CREDITS: 4.00	
MTR 4133	Ship Design and Seaworthiness
Provides students with the knowledge and skills required to maintain and operate their vessels in a safe manner and in a seaworthy condition, and to be able to understand and manage consequences related to main propulsion and auxiliary machinery malfunction. Meets the competency standards stipulated in Table A-II/2 of STCW Convention.	
CREDITS: 3.00	
MTR 5003	Ship Operations Project
An appropriate project will be chosen by the student with guidance from relevant faculty members. Undertaking the project will integrate many of the skills and knowledge obtained during the program and develop independent learning. Students are expected to submit, and defend, their project in the presence of their peers, and faculty members.	
CREDITS: 3.00	
MTR 5004	Shipboard Commercial Operations
Provides students with the knowledge of the legal framework within which a ship operates, essential aspects of the shipping business environment and an understanding of shipping economics and its risks. Meets the competency standards stipulated in Table A-II/2 of STCW Convention.	
CREDITS: 4.00	
MTR 5014	Maritime Law and Ship Protection
Provides students with knowledge of the legal framework within which a ship operates. It covers the important international maritime legislation, along with their application to management of ship operations. An insight into marine insurance risks involved with shipping is given. The course also deals with extensively with survey and certification of ships.	
CREDITS: 4.00	
MTR 5023	Ship Administration
Prepares students for command of vessels. The duties of the master along with various leadership strategies to best meet the challenges of leading and shaping a diverse group of officers and crew on a vessel are covered. In addition, the differences between shipboard command and senior leadership positions ashore are identified and, the leadership skills and techniques to be employed in a variety of on board emergency situations are discussed.	
CREDITS: 3.00	

MTR 5024	Marine Transport Management
Provides the student with knowledge and skills necessary to safely load, carry, care and unload a variety of cargoes from a majority of vessel types. Covers procedures for and best practices of safe cargo handling in accordance with the provisions of the relevant legislation, including IMDG Code; IMSBC Code; and MARPOL with emphasis on the carriage of dangerous, hazardous and harmful cargoes.	
CREDITS: 4.00	

MTR 5105	Ship Stability and Dynamics
Focuses on the conceptual knowledge and practical application of ship stability. On completion of the course the student will be able to control and manage the stability of the vessel while at sea and in port and to increase the safety and proper care of the vessel, its cargo and crew. Meets the competency standards stipulated in Table A-II/2 of STCW Convention.	
CREDITS: 5.00	

MTR 5124	Shipboard Command Operations
Provides students with the knowledge and skills necessary to handle large power driven vessels safely on passage and in and out of port in extreme weather conditions and emergencies. Covers emergencies involving steering and towing and includes berthing, un-berthing and anchoring under various weather conditions. Meets the competency standards stipulated in Table A-II/2 of STCW Convention.	
CREDITS: 4.00	

MTR 5125	Marine Navigation Management
Provides the student with skills and knowledge to plan and manage a voyage using advanced navigational techniques and to lead and manage the bridge team under differing circumstances including search and rescue scenario. Meets the competency standards stipulated in Table A-II/2 of STCW Convention.	
CREDITS: 5.00	

MTS 1002	Leadership
The course of leadership is aimed at developing the leadership proficiency in cadets, and how to overcome leadership problems besides the requirements throughout his roles that involve leadership. This program includes: the general nature of leadership, human behavior, characteristics of leadership, a guide to proper leadership, leadership obstacles and solutions, leadership in battle field, leadership in high ranks, a practical application to leadership roles.	
CREDITS: 2.00	

MTS 1102	Staff Duties
Designed to teach cadets the basics principles of the military writing and correspondence, military abbreviations, and operations orders. This course includes: the principles of military writing and correspondence, telegrams, orders, standard module for operations order, military abbreviations. The course also includes practical exercises.	
CREDITS: 2.00	

MTS 1112	Topography
The topography course aims at training cadets to read and use land navigation maps, compasses and GPS to navigate on the ground. The course includes different types of maps, geographic coordinate systems, land navigation, military protractor, map guidance, finding places, the exchange of visions, aerial photographs, and using GPS. Practical exercises are also organized to provide experience of night marching, and using the compass, military protractor, and GPS.	
CREDITS: 2.00	

MTS 1123	Air Force History and Organisation
Provides the students with an appreciation of the historic development of Air Power and the UAE Air Force into the current modern Air Force and Air Defence organisation. The students then examine the current structures, organisation and roles of the Air Force and Air Defence and the contribution towards national security. Intelligence and Security, Command and Control, Operational Assets and future developments are all discussed	
CREDITS: 3.00	

MTS 2103	Aircraft Weapons Systems
This course is an introduction to the types, specification and effects of commonly employed aircraft weapons systems and examines the advanced weapons and guidance systems. The course covers a wide range of weapons systems and external pods that are used to achieve a wide range of military missions such as Air-To-Air missions, SEAD missions or Air-To-Surface missions. Particular attention will be placed on the trends of development of modern aircraft weapons.	
CREDITS: 3.00	

NAV 1104	Navigation I
Designed to provide students with elementary theoretical knowledge of general navigation and International Regulations for preventing collision at sea. This course will cover topics such as basic navigation terms, navigational charts and methods of fixing, tides and tidal streams theory, use of navigational aids and the uniform time system. Students will be familiarized with the use of navigation publications, as well as international regulations relating to sailing under various scenarios and conditions.	
CREDITS: 4.00	

NAV 2004	Navigation II
The course aims at providing students with in-depth theoretical knowledge of Navigation. Upon completion of the course, the students are expected to be familiar with the marine navigation, passage planning, pilotage and blind pilotage, execution of anchoring and usage of various navigational aids. During this course, the students will also be familiarized with the International Regulations for Preventing Collision at Sea.	
CREDITS: 4.00	

NAV 2104	Navigation III
Provides the students with in-depth knowledge in chart work and Astro Navigation theory for practical application at sea. Covers topics such as use of basic Astro Navigation related books and publications, prediction of rising and setting times of various heavenly bodies, calculation of gyro compass and observed position by means of the reduction of sun. Comprehensive knowledge about chart work to solve time distance problems is developed in the course.	
CREDITS: 4.00	

NAV 4003	Navigation Team Training
Students will build upon previous courses to hone their pilotage skills as part of an integrated bridge team. Rotating to all roles and positions in both the simulator and the charthouse will expose students to every facets of the team operation enhancing understanding when in the leadership role.	
CREDITS: 3.00	

NAV 4014	Ocean Navigation
Students will be required to safely navigate a ship and correctly apply the collision avoidance regulations in open water conditions. This will include the application and evaluation of GPS as well as the ship's log and echo sounder. Students will also need to apply steering and sailing rules applicable to open water navigation; including the analysis shipping situations through synthesizing electronic aids such as AIS and radar with visual observation.	
CREDITS: 4.00	

NAV 4023	Coastal Navigation
Students will be required to safely navigate a ship and correctly apply the collision avoidance regulations in coastal waters and in restricted visibility. This will include the use of terrestrial fixing and radar navigation techniques. Students will also need to respond to vessels and aircraft in distress.	
CREDITS: 3.00	

NAV 4033	Restricted Waters Navigation
Students will be required to safely navigate a ship and correctly apply the collision avoidance regulations in restricted waters. This includes the planning and execution of anchorages. This requires the synthesis and application of bridge equipment, visual observations and navigation theory. Student also need to evaluate anchorage positions and weather conditions.	
CREDITS: 3.00	

NPS 2004	Seamanship I
The course aims at providing the students with theoretical knowledge of basic seamanship terms, rope work, rigging, practical handling of boat work and Anchor work. On completion of this course the students are expected to become familiar with basic seamanship terms and definitions, various parts of ship, types of anchors, working on anchors and cable, basic rope work, use of bends, hitches and berthing hawsers.	
CREDITS: 4.00	

NPS 2013	Naval Communications
Students will be provided with in-depth theoretical and practical knowledge of Naval Communication in preparation for practical application at sea and ashore. This course will introduce Naval communication publications, flags, flashing light and maneuvering board. The classroom instructions will be followed by practical of Naval Communication systems, visual and Naval message procedures and tactical maneuvering to control the force at sea during sea training.	
CREDITS: 3.00	

NPS 2103	Naval Leadership and Management
This course will provide students with an in depth theoretical knowledge of leadership theories, giving special attention to how each theoretical approach can be applied in a naval environment. Initially students will be introduced with concept of leadership including importance of vision, communication and motivation in the leadership. They will also learn about the concept of leadership from Islamic point of view vis-à-vis leadership theories, importance of individual attribute, competency of a leader in effective problem solving.	
CREDITS: 3.00	

NPS 2113	Seamanship II
The course is designed to further build upon the initial Seamanship knowledge gained by the students during Semester III. The course aims at providing the students with theoretical knowledge of Seamanship which include Life Saving Equipments used onboard, Towing, Replenishment at Sea (RAS), Naval ceremonies, Ship's Husbandry and Ships steering and Conning Orders, responsibilities of Officer of the Watch at sea and in harbour. Upon completion of this course the students are expected to become familiar with various aspects of sea life.	
CREDITS: 3.00	

NPS 3003	Midshipman Sea Time - Seamanship
The course aims at providing practical training to midshipmen related to general seamanship, ship's husbandry, anchor work, mooring, boat work, towing and replenishment and Rigging onboard a warship. This will be based on the theoretical benchmark set for students in the Naval College. The course is primarily designed to impart practical training through attachment with the Executive department onboard ship.	
CREDITS: 3.00	

NPS 3013	Midshipman Sea Time - Navigation
The course aims at providing midshipmen practical manifestation with regards to Navigation knowledge gained at RBSAM. The course is divided into four main sections which include General Navigation, Bridge knowledge and organization, Officer of the Day (OOD) duties and responsibilities, Officer of the Watch (OOW) duties and responsibilities and practical tasks pertaining to different bridge emergencies and astro navigation. It also provides hands on training using Fleet Work Simulator in order to enhance their practical knowledge further.	
CREDITS: 3.00	

NPS 3023	Midshipman Sea Time - Naval Engineering
The course aims at providing practical training to midshipmen related to Marine Engineering, Logistics and Nuclear Biological Chemical and Damage control (NBCD) onboard a warship based on the theoretical knowledge acquired by the students at Naval College. The course is primarily designed to impart practical training through attachment with Engineering and Logistics departments? onboard ship.	
CREDITS: 3.00	

NPS 3033	Midshipman Sea Time - Naval Operations and Communications
The course aims at providing practical training to midshipmen related to Naval Ops and Communications onboard ship based on the theoretical knowledge gained at Naval College. The course is primarily designed to impart practical training through attachment with Operation Department onboard ship.	
CREDITS: 3.00	

NPS 3043	Midshipman Sea Time - Fleet Work Simulator
<p>This course is a part of the sea training phase, this is aimed at providing practical training to midshipmen on the shore-side Fleet Work Simulator situated in RBSM Naval College. The course is primarily designed to consolidate theoretical knowledge through practical training in WEDICS, GMDSS, RADAR Fleet Work Simulator and NTPRO 5000. It also imparts knowledge of the Simulator itself, for future reference.</p>	
CREDITS: 3.00	

NPS 4003	Bridge and Ship Systems
<p>Students will be given training in the operation and procedures for radar, AIS, ECDIS, GMDSS, steering and control systems. This includes being able to control and steer the ship as Officer of the Watch and Helmsman respectively. Students will be expected to master each technology and to synthesize all elements collectively to keep a watch and apply their knowledge to real world situations through the use of a bridge simulator.</p>	
CREDITS: 3.00	

NPS 4124	Communications and Intelligence
<p>Students will be required to communicate via flashing light employing Morse code and communicate via voice and text using both GMDSS and military equipment. Furthermore, students will be required to encode and decode tactical Manoeuvring, common operational and admin signals. With respect to Manoeuvring signals, the students will correctly report and execute turns, wheels and formations.</p>	
CREDITS: 4.00	

NPS 4133	Capstone Project
<p>Students will be required to research, prepare and brief first the feasibility of a proposed passage of a ship from one destination to another, then an outline plan of this passage culminating in a full navigation plan to a qualified CO or Navigator. The series of assignments will include demonstration of signal and letter writing skills through the production of accompanying signals and correspondence.</p>	
CREDITS: 3.00	

NSE 1003	Fluid Mechanics for Naval Applications
<p>This course will provide basic understanding of the principles of fluid mechanics, fluid properties, pressure measurements and its applications. The students will also learn about the concept of buoyancy and stability as applied to naval ships. In addition, students will be familiarized with the concept of continuity, energy conservation equations and their practical applications.</p>	
CREDITS: 3.00	

NSE 1013	Ship Structure and Damage Control I
<p>The course aims at providing the students with the knowledge about the ship structure, materials used in Naval ship construction and guide lines for basic ship design and construction process. The course also covers basic knowledge of Nuclear, Biological and Chemical Defence and Damage control including Fire Fighting (NBCD) onboard warships encompassing basic concepts of NBCD and basic terminology related to NBCD. It also gives detailed information about the basics of Nuclear, biological and chemical warfare and defence against NBC attacks.</p>	
CREDITS: 3.00	

NSE 2003	Ship Electrical Technology
<p>This course is designed to introduce the basic principles of electrical and electronic circuits as applied to modern naval ships. Topics include DC, and AC circuits, Kirchhoff's laws, three-phase power systems, semiconductor devices, logic circuits, the operation of machines and Power and Distribution System.</p>	
CREDITS: 3.00	

NSE 2013	Principles of Naval Sensors
<p>The course is designed to introduce the basic concepts of Naval Sensors, and their applications to naval operations and warfare. It starts with the definitions and concepts of Radio and Sound waves, and their propagation mechanisms. Various types of Radars, Sonars, and Electrooptical sensors are described. Their applications are explained to familiarize the students to the roles of these sensors in naval scenarios.</p>	
CREDITS: 3.00	

NSE 2023	Maritime Environment and Law of the Sea
<p>The course is designed to introduce the basic concepts of meteorology, oceanography, Law of the Sea and their impact on naval operations and warfare. Students will be acquainted with meteorological phenomena, and different local weather conditions. In oceanography, ocean, ocean current, importance of the Arabian Gulf and monsoon seasons will be discussed. In Law of the Sea, students will deal with jurisdictional boundaries such as territorial waters, contiguous zones, high seas, exclusive economic zones specific to the UAE.</p>	
CREDITS: 3.00	

NSE 2033	Ship Structure and Damage Control II
<p>The course aims at providing the students with the knowledge about the Ship Structure and DC on basic concepts of ship stability and also about material used onboard ship including its preservation. It also aims to provide the information regarding basic stability conditions. It also covers effects of various loading conditions and methods to calculate stability in case of damage to the ship structure. Finally, Students will also be given practical demonstrations of various loading conditions and states of ship in Laboratory environments.</p>	
CREDITS: 3.00	

NSE 2043	Ship Propulsion I
<p>The course aims at providing the students with comprehensive knowledge of Marine Engineering Systems onboard warships with special emphasis on theoretical concepts and their application. In this course, students will learn administrative and functional organization of the Marine Engineering department onboard warships. It will also cover the working and components of conventional heat engines, propulsion and transmission systems, and combinations/configurations of engines and the transmission system.</p>	
CREDITS: 3.00	

NSE 2103	Ship Propulsion II
<p>This course aims at providing students with knowledge of the latest developments in propulsion systems, and of important auxiliary machinery/equipment fitted on warships. The course covers the latest developments in propulsion engine technology, such as water jet and electric propulsion systems, and descriptions of auxiliary machinery fitted onboard warships, such as refrigeration and air conditioning systems, the firemain system, desalination plants and steering systems.</p>	
CREDITS: 3.00	

NWR 1103	Naval Warfare and Operations I
The NWandO Course will familiarize the students with basic naval warfare concepts. It is an introduction to various naval platforms and will cover weapon/sensors outfits, surface warships, submarines, aircraft, weapons, and sensors, Above Water Warfare (AAW), and Underwater Warfare (UWW). The course also covers an introduction to AIO (Action Information Organization) with its peace and war time roles.	
CREDITS: 3.00	

NWR 2103	Naval Warfare and Operations II
This course aims to acquaint Students with the basic concepts of various forms of naval warfare, including Anti-Air Warfare, Anti-Surface Warfare, Anti-Submarine Warfare, Mine Warfare, Electronic Warfare and Amphibious Warfare. Concepts are introduced in a practical manner by emphasizing the aim, purpose, platforms used, important terms and definitions and basic tactics involved. Military Operations Other Than War conducted by Naval Forces and principles of Naval Communication are also introduced.	
CREDITS: 3.00	

NWR 4003	Bridge Warfare I
Students will be required to perform as an OOW to support surface and sub-surface operations. This includes operating with organic helo, conducting surface engagements and combined anti-submarine exercises. Students will need to analyze the tactical situation and respond appropriately to developing threats.	
CREDITS: 3.00	

NWR 4013	Bridge Warfare II
Students will be required to accurately and timely apply above water warfare procedures in a serialized program environment against air threats. Students will need to analyze the tactical situation and respond appropriately to threats and changes in emission control while remaining cognizant of the ship's disposition and formation.	
CREDITS: 3.00	

OPM 2103	Operations Management
Provides a detailed study of value-added organizational activities, from procurement of resources and transformation into manufactured goods and service outputs. The course highlights the importance of operations management as a key function in most organizations, and discusses how effective management of operations is directly linked to organizational strategy. The course also introduces strategic operations issues such as capacity planning, location planning, product/work design and development, and general quality policies.	
CREDITS: 3.00	

PCJ 2003	Law and Procedure of Evidence
This course will cover the police and the prosecutors, the suspect or the accused, and the court system. The course will discuss main principles such as presumption of innocence, proper arrest, protection and gathering of evidence, accessibility of court, the criminal justice system, jurisdiction of criminal courts, private prosecution, search and seizure, arrest, indictments and charges, the conduct of criminal proceedings and the presentation of case.	
CREDITS: 3.00	

PCJ 2023	Project Management for Law Enforcement
This course introduces the student to project management principles and their application to law enforcement projects. The course will discuss law enforcement case studies from Abu Dhabi Police and the associated project cycle including Initiation, Planning, Execution, and Closing. The course will also cover issues related to working with internal and external teams and agencies.	
CREDITS: 3.00	

PCJ 2043	Community Policing
The course will integrate the theories and practices of contemporary community policing through analysis of various police case studies. Problem solving models and crime prevention strategies will be researched, developed and applied. Through practical exercises, students will analyze community issues related to crime and disorder, design and implement strategies to resolve the issues, and develop an analysis in order to evaluate success.	
CREDITS: 3.00	

PHY 1103	Physics I
An introductory level physics course that is essential for all Engineering programs. It covers many of the fundamental principles of physics such as units of measurement, linear motion, circular motion and angular motion, forces and Newton's laws of motion, work and energy, collisions and conservation laws, momentum. Laboratory work is required to reinforce and stress the importance of these principles using the experimental method for investigating and reporting results.	
CREDITS: 3.00	

PHY 1203	Physics II
A second course of introductory level physics course that is key for several engineering programmes. It covers many of the fundamental principles of physics such as electric charge and electrostatics fields, Coulomb's law and electric potential, electric current and magnetic fields, Ampere's law and Faraday's law of induction, optics, sound and mechanical waves. Laboratory work, utilising experimental methodology and written reports, is used to reinforce these principles.	
CREDITS: 3.00	

PST 1003	Criminal Law
This course covers the basic elements of information on the theory of criminal punishment. This involves the definition of criminal punishment and its nature, the type of punishment and its application and the role of the judiciary in such application. In addition, criminal treatments and other perceptual measures are also studied and this will be in comparison with punishment. The course according to UAE criminal law	
CREDITS: 3.00	

PST 1013	Police Skills and Responsibilities
Focuses on the proficiencies and procedures applied through critical thinking techniques and hands-on development. Analytical, investigative and physical skills are developed the students' abilities. It includes: identifying a structure and duties of ADP, then the definition of conditional terms used in context, and to clarify the actions of the police in crime prevention, and identifying the duties of police patrols and security guards, which required skills of physical conditioning and defensive tactics to protect structures.	
CREDITS: 3.00	

PST 1023	Criminal Procedure
<p>This course includes definition Law of Criminal Procedure, the public and the case, in terms of its edges the suspect and public prosecution, and their rights and obligations due to them, and the formation of the public prosecutor, and the relationship between its members, and its competence in the public interest litigation and outside legal rules relating to be set up, the competent authorities, and restrictions contained them, and ways to expiry.</p>	
CREDITS: 3.00	

PST 1033	Infantry Police and Practices
<p>This course will enable the student to examine the history, nature, and scope of the Abu Dhabi Police (ADP) Infantry. Infantry Training Applications explains the importance of the infantry tactics practiced by the Abu Dhabi Police through an interdisciplinary approach that blends a liberal arts educational experience with criminal justice. Instruction will include lessons in discipline, team building, and leadership traits through class participation and infantry movements.</p>	
CREDITS: 3.00	

PST 1103	Weapons Science and Practice
<p>This course will provide students with theory knowledge about weapons and the basic practice firearm techniques and firearms safety. The course is designed to prepare the policeman competency to handling the weapons and provide him by the laws and procedures regarding firearms using according in UAE law.</p>	
CREDITS: 3.00	

PST 1123	Official Correspondence and Computer Skills
<p>This course will provide students introduction to information systems; Information systems in organizations, technical and managerial concepts necessary to run an e-policing systems, and regional topics may include: legal framework, security and trust, biometrics and ID system</p>	
CREDITS: 3.00	

PST 1133	Traffic Law
<p>The course includes traffic definition and terminology traffic, classification of vehicles, traffic laws, traffic offenses and penalties, and the measures to be taken in these cases. Also, the course prepares the students to enforce the law of traffic and follow the appropriate procedure in dealing with roads users.</p>	
CREDITS: 3.00	

PST 1153	Maintaining Public Order
<p>The course covers principle of project management and its application to law enforcement. Also, the course will cover patrol procedures to psychomotor skills on defensive tactics, firearms procedures, driving skills and officer-violator contacts.</p>	
CREDITS: 3.00	

QMT 2003	Total Quality Management
<p>Discuss the principles, concepts and quality philosophies related to total quality management. Examines why quality management is fundamental to strategic management and its importance to organizational excellence. Identify and analyze how quality concepts such as leadership and partnership can lead to organizational excellence, superior value, and global competitiveness.</p>	
CREDITS: 3.00	

QMT 2103	Quality Standards and Excellence Models
<p>Equips learners with fundamental tools, models and strategies for continuous and breakthrough improvement in organizations through understanding and applying current practices in quality standards and business excellence models. The course addresses ISO standards and Quality Management systems in part one and international and local excellence models in part two. Learners acquire an organizational view of performance excellence, as reflected in the ISO standards, Malcolm Baldrige criteria, EFQM framework, complemented by UAE-based models.</p>	
CREDITS: 3.00	

QMT 3003	Quality Management Tools
<p>Provides students with skills in the application of tools and methods related to quality improvement and management methods implemented in organizations for excellence and quality. Focuses on skills to create cause and effect diagrams, Pareto charts, statistical process control, CEDAC, and six sigma. Addresses employee involvement and management commitment towards using quality tools and quality improvement methods in a continuous manner.</p>	
CREDITS: 3.00	

QMT 3013	Business Process Management
<p>Develops an in-depth understanding of business processes and examines the workflow, equipment needs, and implementation requirements for a particular process. The course examines the roles and responsibilities in strategic realignment, as well as the tools, methods, techniques and templates to map, plan and implement processes. The relationship with information systems, workflows and automation strategies are examined to achieve success with the process design.</p>	
CREDITS: 3.00	

QMT 3103	Organizational Change Management
<p>The course deals with the nature of change and its driving force in business organisations. It provides an integrated approach to the theory and practice of organisational change. It particularly involves learning the processes in managing and leading change within the theoretical frameworks of organisational culture, power, politics, and leadership. The course will also consider the design and implementation of effective interventions specifically focused on developing HR related skills.</p>	
CREDITS: 3.00	

QMT 4003	Service Quality Managements
<p>Provides an integrated approach to service quality management addressing the factors of development of long term customer relationships as a pathway to achieving excellence and quality. Guides learners through service design, delivery and recovery to evaluate different service models such as Service Gaps, Service Quality (SERVQUAL) and Customer Relationship Management (CRM) to implement strategies that support business processes and development.</p>	
CREDITS: 3.00	

QMT 4013	Advanced Strategic Management
<p>Builds on the foundation formed through topics from BSN 3503 and aims to enhance the strategic management competencies of the students. Addresses conceptual frameworks such as VRIO to diagnose and manage strategic capabilities and key drivers of competitive advantage. Evaluates business and corporate strategy based upon the firm's unique proposition of value, profit and people and discusses organizational structures as levers of implementation of the strategy.</p>	
CREDITS: 3.00	

QMT 4033	Statistical Quality Control I
Provides in-depth analysis of statistical models applied in DMAIC (Define, Measure, Analyze, Improve, Control) problems, including statistical models to analyze and make inferences for quality control and improvement applying probability distributions, probability plots and point estimations for uni and multi-variate samples.	
CREDITS: 3.00	

QMT 4043	Supply Chain Management
This course focuses on the design, planning, control, and improvement of supply chains for competing effectively in the context of global operations. Topics include supply chain structure and configuration, approaches to intra-organizational and inter-firm integration, and complexities of material, information, and cash flows across international borders.	
CREDITS: 3.00	

QMT 4053	Lean Management
Provides fundamental knowledge about Lean principles, concepts, tools and methods to achieve sustainable improvement in the organization, covering diagnostics tools, Lean transformation practices, and the human and technical aspects of the Lean transformation. Enables learners to demonstrate the skills, competencies and mindset of a Lean Thinker from through the use of case studies and individual or/and group exercises simulating real world business applications.	
CREDITS: 3.00	

QMT 4103	Project Management
Provides the essential knowledge of project management principles, methods, tools and techniques used in projects, including key terminology, context and processes. Enables the students to demonstrate skills in project scope management, project time management, project cost management, project quality management, project human resource management, project communications management, project risk management, project procurement management and project stakeholder management.	
CREDITS: 3.00	

QMT 4113	Experimental Design
Provides in-depth analysis of the techniques to plan and design experiments to check and validate empirical models for process development and improvement, presenting the results of statistically designed experiments and develop models that are effective for continuous quality management in an organization.	
CREDITS: 3.00	

QMT 4123	Six Sigma
This course provides knowledge and practical skills of six-sigma concepts through the application of related tools and techniques. The student will be able to plan, communicate and manage six sigma processes in an organization after the completion of the course. Introductory topics on Green belt and Black belt will prepare students for industry certifications, complement their ability to analyze critical operations and evaluate process capabilities of organizations.	
CREDITS: 3.00	

QMT 4133	Statistical Quality Control II
Provides and in-depth study of effective statistical process monitoring and control using time-weighted and other advanced control chart techniques, as well as the application of multivariate process monitoring, adjustment and control tools. Learners improve skills in process design and improvement with designed experiments that lead to process optimization, and acceptance sampling.	
CREDITS: 3.00	

QMT 4143	Value Stream Mapping
Provides in-depth knowledge about lean concepts and application of tools and techniques related to value stream mapping. Examines the identification of value streams, planning, and application of lean management concepts at three stages of lean (i.e. demand, flow and levelling). Using critical evaluation students will be able to identify value stream processes which are most beneficial to the business, apply and map lean metrics into a future state of efficiency and provide recommendations for value streaming and sustainable processes.	
CREDITS: 3.00	

QMT 4153	Quality Auditing
Provides the basics of quality auditing, covering models, techniques and methodologies necessary to understand, plan, deploy, and evaluate quality audit processes as part of a quality management system. Focuses on professional standards, technical skills and core competencies of the quality auditor, applicable to the preparation, performance, reporting, follow-up and closure of the quality audit process.	
CREDITS: 3.00	

QMT 4203	Quality Research Project
Provides students with the resources to apply the research skills from previous courses as a framework for a final industry-based research project for the Quality Management major. The final industry research project encourages students to identify and address learning outcomes across major. The purpose is to integrate previously taught stand-alone courses in order to identify opportunities for the application and critical review of theory and practice in a business environment.	
CREDITS: 3.00	

SLM 2003	Supply Chain Management
Focuses on the design, planning, control, and improvement of supply chains for competing effectively in the context of global operations. Topics include supply chain structure and configuration, approaches to intra-organizational and inter-firm integration, and complexities of material, information, and cash flows across international borders.	
CREDITS: 3.00	

SLM 2103	Supplier Management
Investigates the basic concepts and main activities in procurement and supply management. We will study the fundamental logic and commonly used practices in making procurement and supply decisions. We will also look at the procurement and supply function from a manager's perspective and learn the general principles and guidelines in choosing sound purchasing and supply strategies.	
CREDITS: 3.00	

SLM 3103	Warehouse and Distribution Management
Focuses on the effective management of warehousing and distribution, which are vital to the fulfillment of customer demand and the ultimate success of a supply chain. It deals with key elements of the distributions and warehousing infrastructure, with a view to ensuring optimal logistical performance.	
CREDITS: 3.00	

SLM 3113	Logistics Management
Covers the basic concepts and activities in logistics systems, as well as transportation issues impacting supply chains. The course looks at techniques for making optimal transportation logistical decisions and associated multi-location operational problems. The course examines location planning aspects and deals with demand forecasting for logistical management.	
CREDITS: 3.00	

SLM 4003	Supply Chain Risk Management
Focuses on the identification, assessment and mitigation of, and response to, supply chain risks. It covers strategic and tactical approaches for mitigating various failure points within the supply chain, and quantifying financial, operational hedging, outsourcing, and new product development risks.	
CREDITS: 3.00	

SLM 4013	Supply Chain Operations Planning and Control
Examines important concepts and issues involved in managing the supply chain operations of a business enterprise. It covers important concepts, issues, and methods of an operations planning and control system such as the transformation process, material planning framework, sales and operations planning, resource plan, master scheduling, material planning, detailed capacity planning, production activity control, and strategic implementation of MPC systems.	
CREDITS: 3.00	

SLM 4033	Procurement and Inventory Management
Students learn about different inventory management decisions that affect a firm's buying practices. Best practices in inventory management and sourcing and supply management within a domestic and global supply chain context are also reviewed. Students learn about good practices that buying professionals can use to be able to perform their buying tasks more effectively. These practices include selecting the right suppliers, negotiations skills, conducting price and cost analyses, and using information systems to make buying decisions.	
CREDITS: 3.00	

SLM 4103	Sourcing in Procurement
Examines appropriate tools and techniques that can be used to enable organization to assess sourcing options when procuring goods, services or work from external suppliers. Best practices in sourcing and procurement within a domestic and global supply chain context will be reviewed. Student will be able to develop coherent understanding of important concepts such as strategic sourcing in relation to procurement, supplier evaluation and selection, developing a plan for sourcing, and the main processes in sourcing requirements.	
CREDITS: 3.00	

SLM 4113	Negotiating and Contracting in Procurement
Investigates the basic concepts and main activities in negotiating and contracting from a procurement and supply chain management perspective. Deals with the different aspects and approaches to negotiations and look in detail at the negotiations process. Also looks at tendering as procurement tool. Examines the legal aspects of purchasing, including contract management from a procurement perspective.	
CREDITS: 3.00	

SLM 4123	Managing Relationships in Procurement
Discusses, analyses and applies business relationship management concepts from the perspective of the procurement manager. This includes contract management, assessing the relationship management approach, evaluating supplier performance, and the creation of initiatives to improve buyer/supplier capabilities and performance.	
CREDITS: 3.00	

SLM 4203	Logistics and Supply Chain Final Project
Uses research skills from previous courses as a framework for a final industry-based research project for the Logistics and Supply Chain major. The final research project encourages students to identify and address learning outcomes across the major. The purpose is to integrate previously taught stand-alone courses in order to identify opportunities for the application and critical review of theory and practice in a business environment.	
CREDITS: 3.00	

STS 2003	Business Statistics
Develops student's ability to assess and critically interpret statistics and business information and apply them in changing business environments. Develops a clear theoretical understanding of various analytical tools, including descriptive statistics; probability; confidence intervals, and hypothesis testing; and an appreciation of the application of analytical tools to business decision contexts. These skills and competencies provide a foundation for professional practice and further study in the major's degree.	
CREDITS: 3.00	

STS 3113	Advanced Statistical Models
Develops student's ability to assess and critically interpret statistics and business information and apply them in changing business environments. Develops a clear theoretical understanding of advanced analytical tools including advanced hypothesis testing, ANOVA, correlation, regression and time series analysis, applications of advanced non-parametric models, and statistical process control.	
CREDITS: 3.00	

TRM 2003	Introduction to Tourism
In this entryway course, students will be introduced to the major concepts, issues, and theories of tourism and hospitality as an economic sector and topic of academic study. The course will cover a broad range of topics related to the travel experience, from business development to the linkages between tourism as an industry and the impacts it has on communities and places. Students will also be introduced to key elements of the tourism industry and opportunities for employment within this industry.	
CREDITS: 3.00	

TRM 2103	Consumer Behaviour in Tourism
<p>This course explores the importance of consumer behaviour in tourism, the typologies of tourist behaviour, market segmentation and the global pattern of tourism demand. It focuses on topical issues in tourist motivation, emergence of new segments and changing tourist demands. This course also provides students with the knowledge on needed to investigate ways of optimizing the effectiveness of tourism marketing activities through understanding how consumers make their decisions to purchase or use tourism products.</p>	
CREDITS: 3.00	

TRM 3003	Tourism Operations and Analytics
<p>Integrates the functional areas of operations in tourism, travel and hospitality organisations. Students will study process planning, business analytics, delivery and control systems for the production of goods and services in the tourism, travel and hospitality Industries. The student is introduced to airport operations, processes of service quality and customer satisfaction that enables competitive advantages for the organization.</p>	
CREDITS: 3.00	

TRM 3013	Integrated Technologies for Tourism
<p>Explores the importance of tourist consumer behavior theories, typologies and models, as well as the segmentation of the tourism market and the global pattern of tourism demands. Examining tourism flows, the emergence of new markets and ongoing changes, students will develop skills in research and analyzing tourist behaviors. Tourist decision making processes and impacting factors will be examined before and during tourist travels, areas to be explored include: special interests, cultural and heritage, visitor attractions, events and so forth.</p>	
CREDITS: 3.00	

TRM 3103	Sustainable Tourism
<p>The course investigates the unique and rapidly developing fields of sustainable and special interest tourism (SIT). It examines key activities and processes that ensure the sustainability of tourism ventures, and provides an overview of the ways SIT contributes to industry development of sustainable tourism. The course enables students to plan, manage and promote sustainable tourism/SIT ventures. It also discusses the targeted marketing of a range of special interest activities.</p>	
CREDITS: 3.00	

TRM 3113	Tourism Human Resource Management
<p>Using finance theories and practices, this course deals with financial management issues in the tourism industry and its related business sectors. Students will examine pertinent tourism finance-related case studies and explore viable options for managing and resolving monetary/financial issues. Students develop tourism-sector-specific financial skills, predicated on standard financial management techniques.</p>	
CREDITS: 3.00	

TRM 4003	Economics of Tourism
<p>Investigates how business analytics can be used to assess and integrate functional areas of operations in tourism and hospitality operations. It looks at how big-data and general business analytics formal methods can be used to enhance the competitiveness of tourism-related businesses. Deals also with the use of business analytics to support planning, delivery and control processes, for the optimal provision of services in the Tourism and Hospitality Industry. It examines in depth how business analytics can be used to enhance service quality.</p>	
CREDITS: 3.00	

TRM 4023	Strategic Management in Tourism
<p>This course explores strategic management and planning in a tourism context. Using both a theoretical and practical approach, students will examine the concepts of strategic planning and competitive strategy and how they can be successfully applied by organizations in an increasingly complex and global tourism environment.</p>	
CREDITS: 3.00	

TRM 4033	Special Interest Tourism
<p>Examines key logistical issues in tourism and how these aspects may be effectively managed. The students critically assess the influence of prime logistical factors on tourist business performance. Students study supply chain and procurement activities, in the context of tourism and review topical case studies. A number of frameworks and techniques for logistical management are presented, for optimal functioning of tourism businesses.</p>	
CREDITS: 3.00	

TRM 4103	Event Management for Tourism
<p>Examines theoretical and applied aspects of tourism event management. Presents structured frameworks for planning, initiating and managing destination-based tourism events projects. Looks additionally at key factors and processes involved in the strategic marketing for tourism events. Financial control, risk management, legal and logistical aspects of tourism events are also discussed.</p>	
CREDITS: 3.00	

TRM 4113	Heritage and Cultural Tourism
<p>From the perspective of international tourism, the course looks at HR issues related to local culture adaptation, adoption or universalization for tourism operations. Investigates transnational workforce recruitment and selection practices, including levels of ascription. Emphasizes trends for tolerance of diversity, cultural empathy and controlled differentiation. Discusses the use of the ERPG framework to assess levels of ethnocentric, regiocentric, polycentric and geocentric behavior as well as the influence of exogenous and endogenous factors on international HRM.</p>	
CREDITS: 3.00	

TRM 4123	Visitor Attraction Management
<p>Addresses core issues relating to the management of attractions, as a key component of tourism operations. Deals with strategic and operational aspects of attractions. The course discusses attractions life-cycle processes, as well as financial, risk management and people-management issues that may modulate the performance of attractions.</p>	
CREDITS: 3.00	

TRM 4133	Tourism Marketing
<p>Deals with marketing characteristics, planning and communication strategies. Tourism market segmentation and market entry issues are considered. Structured frameworks for marketing and market analysis are discussed. Strategic aspects of tourism marketing, branding and composition of the marketing mix are reviewed. The student develops a context-dependent marketing plan based on investigative study of current global tourism trends.</p>	
CREDITS: 3.00	

TRM 4203	Tourism Final Project
This is a mainly independent study course that allows students to use the research skills from previous courses as a framework for a final industry-based research project. The final industry research project encourages students to identify and address learning outcomes across major. The purpose is to integrate previously taught stand-alone courses in order to identify opportunities for the application and critical review of theory and practice in a business environment.	
CREDITS: 3.00	

UAV 4003	UAV Pilot Ground School
Ground school training is designed to prepare the student to operate the training aircraft for flight and includes technical and operating details of training aircraft systems and flight line and safety procedures.	
CREDITS: 3.00	

UAV 4012	UAV Pilot General Handling Ground School
Students are taught the specific details of airfield operating procedures, aircraft flight procedures and aircraft manoeuvre procedures for VFR conditions. All aspects of general handling are covered including take-off, landing, climbing, descending, turning, level flight, circuits, emergency recovery, and aerobatics.	
CREDITS: 2.00	

UAV 4022	UAV Pilot General Handling Flying
Students practice general handling flight, applying all information and skills provided by previous courses. Students carry out airfield operating procedures, aircraft flight procedures and aircraft manoeuvre procedures for VFR conditions. Basic flight profiles for general handling are covered including take-off, landing, climbing, descending, turning, level flight and circuits.	
CREDITS: 2.00	

UAV 4031	UAV Pilot Instrument Flying
Students practice flight using only instruments for attitude and location reference. Students adhere to Instrument Flight Rules and follow instrument flight procedures for flight and navigation. Students will fly standard departures and arrivals and will navigation to IFR and local operating procedures using radio navigation aids.	
CREDITS: 1.00	

UAV 4041	UAV Pilot Navigation Flying
Students apply navigational procedures and techniques to fly an aircraft in accordance with a navigational plan, using navigation maps, charts and navigation radio aids. Students practice visual navigation and radio aid navigation.	
CREDITS: 1.00	

UAV 4103	Unmanned Aircraft Operations
This course will prepare the student to be able to select a UAV system to achieve a specific military output and to determine how to configure and use that UAV to achieve the mission goals. The considerations and constraints on UAV operation due to civil and military airspace control are discussed.	
CREDITS: 3.00	

UAV 4113	Unmanned Vehicle Systems
Students will study the wide range of systems commonly found on UAVs, including propulsion, payload, automation and remote control, communications and sensing systems.	
CREDITS: 3.00	

UAV 4203	UAV Ground School
Ground school training is designed to prepare the student to operate the training aircraft for flight and includes technical and operating details of training aircraft systems and flight line and safety procedures	
CREDITS: 3.00	

UAV 4213	Flight Simulation Training
Students apply flight path control and navigation skills obtained in manned flight courses to remote control fly a simulator training UAV to achieve a military mission profile. The students will prepare the UAV for flight, carrying out safety inspections, and will practice emergency handling procedures.	
CREDITS: 3.00	

UAV 4223	Flight Training
Students apply flight path control and navigation skills obtained in manned flight courses to remote control fly a live training UAV to achieve a military mission profile. The students will prepare the UAV for flight, carrying out safety inspections, and will practice emergency handling procedures.	
CREDITS: 3.00	

VET 1103	Veterinary Anatomy and Physiology I
This course provides an introduction to basic anatomy and physiological principles from cellular level to the whole organism. The focus will be on establishing a basic understanding and appreciation of the interrelationship between the different topics covered. These topics will include an Introduction to Anatomy and Physiology; the Chemical Basis of Life; Cellular Structure and Processes; Tissues; The Integumentary System; Skeletal System; Muscular System; Cardiovascular System and Blood, Lymph and Immunity. A laboratory component will allow students to explore physiological concepts through a range of laboratory based activities.	
CREDITS: 3.00	

VET 1123	General Chemistry
Develops an understanding and necessary skills to apply the fundamental concepts of chemistry to Veterinary Scientists. The following topics are covered: matter and measurements in chemistry, atomic theory and periodic table, naming and formulas of inorganic compounds, concepts of chemical bonding, mass relations in chemical compounds and reactions. Classroom concepts are supported by laboratory experiments.	
CREDITS: 3.00	

VET 1203	Veterinary Anatomy and Physiology II
The second semester of Anatomy and Physiology will encompass the respiratory system structure and processes, the digestive system, accessory digestive organs, the reproductive systems, the urinary system, the nervous system, the sensory organs and the endocrine system. Differences in animal and avian anatomy is also covered. This course covers histology.	
CREDITS: 3.00	

VET 1223	Animal Science and Husbandry
Upon successful completion of this course students will have the knowledge and understanding of zoological classification of animals, different breeds of animals, approaching, handling and restraining of animal. General management practices, identification (ear tagging, tattoo) and age determination of different animal species (dentations).	
CREDITS: 3.00	

VET 1313	Physics for VET Sciences
This course is an introductory level physics course. It covers many of the fundamental principles of physics such as units of measurement, energy, mechanics, fluids, heat, sound, and light. Laboratory work is required to reinforce and stress the importance of these principles using the experimental method for investigating and reporting results.	
CREDITS: 3.00	

VET 1403	Veterinary Terminology
Covers basic medical terminology beginning with prefixes, suffixes and word roots used in the animal care and veterinary language. Students build on this knowledge by identifying, analyzing, defining, spelling and pronouncing terms and learning abbreviations related to each of the animal systems, as well as basic introductory principles of drug administration routes and drug classifications.	
CREDITS: 3.00	

VET 1413	Inorganic Chemistry
Introduces the fundamental concepts of Inorganic Chemistry, to include chemistry laboratory safety, basic knowledge on the analysis of subatomic and atomic properties based on the periodic table of elements; integration of concepts of higher order of organization of elements to molecules; acid base reactions; oxidation reduction reactions, thermodynamics, kinetics, gravimetric, volumetric analysis and practical aspects of chemical reactions and quantities.	
CREDITS: 3.00	

VET 1904	Veterinary Practicum I
Provides workplace experience in a real working environment both in veterinary laboratories and clinic. It should give students the opportunity to develop professional and work skills, ethics, habits, and practices as observed in real work situations. Combining knowledge obtained at the college to the practice they will do in workplace will improve students' professional skills. This course will enable students to apply and practice skills, knowledge, and techniques gained during their first year in the veterinary programme in real work placement	
CREDITS: 4.00	

VET 2003	Veterinary Pathology
Provides students with an understanding of principles of disease related to pathological processes (mechanisms of cell injury, inflammation and healing, degeneration, necrosis, and neoplasia, vascular disturbance) and their causes (physical, chemical, infectious and genetic). Students will be introduced with concepts of general features of the immune system, innate and adaptive immunity, and disorders of the immune system.	
CREDITS: 3.00	

VET 2123	Animal Nutrition and Feeding
Covers the basic concepts and principals of animal nutrition including digestion in various types of digestive systems. The course will cover the nutritional requirements (water, carbohydrate, proteins, lipids, vitamins, minerals and trace elements) for livestock and companion animals during their various stages of life.	
CREDITS: 3.00	

VET 2133	Systemic Pathology
Systemic pathology covers diseases as they occur in each organ system. Systems covered in Systemic Pathology include the cutaneous, musculoskeletal, cardiovascular, respiratory, and digestive system; Hematopoietic, urinary and genital; the nervous system and endocrine. Lectures are supplemented by practical classes.	
CREDITS: 3.00	

VET 2213	Organic Chemistry
Covers the basic and fundamental principles of organic chemistry, nomenclature, structure and properties of organic molecules, reactions and mechanisms. In the practical component, the student will identify compounds based on their functional groups and apply the knowledge and principles learnt in the theory sessions	
CREDITS: 3.00	

VET 2323	Biochemistry
Focuses on the chemical properties of the living systems, and the study of the molecular basis of life to include their roles in all biological processes. The main topics include structures, properties and functions of amino acids, proteins, carbohydrates, enzymes, lipids and nucleic acids. These topics are supported by hands on practical sessions to demonstrate some of the functions and utilities of biochemical compounds and processes.	
CREDITS: 3.00	

VET 2423	Veterinary Microbiology
Provides students with theoretical and laboratory techniques in the classification, isolation and identification of microorganisms. The course comprises study of the diverse mechanisms bacteria use to cause disease, pathogenicity, body defense mechanisms, A range of important bacteria in livestock and domestic animals will be discussed, with emphasis of their ecology, and pathobiology of the disease. Students acquire an understanding of the mechanisms of the antibacterial action and resistance to antimicrobial agents.	
CREDITS: 3.00	

VET 2904	Veterinary Practicum II
Provides workplace experience in a real working environment both in veterinary laboratories and clinic. It should give students the opportunity to develop professional and work skills, ethics, habits, and practices as observed in real work situations. Combining knowledge obtained at the college to the practice they will do in workplace will improve students' professional skills. This course will enable students to apply and practice skills, knowledge, and techniques gained during their second year in the veterinary programme in real work placement	
CREDITS: 4.00	

VET 3003	Veterinary Parasitology
Students will be familiarized with the essential facts and concepts of veterinary parasitology (Protozoology, Helminthology and Entomology). Emphasis is placed on diagnosis, pathogenesis and management of parasitic infections. The biology of parasites of major veterinary importance will be stressed to impart the understanding necessary for control of parasitism.	
CREDITS: 3.00	

VET 3033	Principles of Genetics and Animal Reproduction
Provides students with a basic understanding of the principles, and concepts of animal genetics, and breeding. This course will cover the physiological basis for reproduction in animals. Topics covered will include comparative functional anatomy and physiology of male and female reproductive systems, development of the gametes, pregnancy and parturition, the various breeding techniques including artificial insemination and embryo transfer and application of genetic engineering in animal reproduction.	
CREDITS: 3.00	

VET 3103	Meat Inspection and Food Safety
Covers the pre-slaughter examination of animals and humane slaughter practices. Lectures outline and explore the pre-slaughter care, slaughtering and preparation operations, ante- and post-mortem examinations, affections, pathological, microbial, parasitic diseases and their decisions, meat spoilage, its causes and prevention, meat preservation, meat microbiology and residues. The principles of food hygiene and safety will be discussed.	
CREDITS: 3.00	

VET 3113	Animal and Disease Prevention I
Provides students with the fundamentals understanding of animal health and agents that lead to disease, including the general aspects of disease within different body systems. It covers the theoretical and practical skills required to perform general clinical examination, including the visual examination, the normal physiologic values for the different animal species and the clinical examination by body systems and region. Additionally, the basics principles of disease prevention in animals will be discussed.	
CREDITS: 3.00	

VET 3143	Veterinary Professional Practice
Provides students with a variety of clinical and nursing skills. Students will be able to perform patient assessment through physical examination and collection of diagnostic specimens including blood, urine, and feces. Therapeutics will also be covered including administration of medications (analgesia, and sedation in animals), bandaging, and wound management. This course will also cover emergency and critical care in herds applicable to a broad range of species.	
CREDITS: 3.00	

VET 3423	Clinical Pathology and Diagnostic Laboratory Tests
Further the skills of students in laboratory tests of various samples (blood in addition to urine, body fluids, and tissue samples) that are commonly used in veterinary clinical pathology. The value of these tests as a diagnostic tool of animal diseases (disorders) will be demonstrated. Understanding and interpretation of results obtained from each test will be emphasised and correlated to clinical cases. Hands-on laboratory experiences will emphasise the common clinical pathological tests and how tests are performed.	
CREDITS: 3.00	

VET 3904	Veterinary Practicum III
Provides workplace experience in a real working environment both in veterinary laboratories and clinic. It gives students the opportunity to develop professional, work skills, ethics, habits, and practices as observed in real work situations. Combining knowledge obtained at the college to the practice they will do in workplace will improve students' professional skills. This course will enable students to apply and practice skills, knowledge, and techniques gained during their second year in the veterinary programme in real work placement.	
CREDITS: 4.00	

VET 4003	Pharmacology and Toxicology for Veterinary Science
Provides students with an understanding of pharmacology and pharmaceuticals applicable in the veterinary field. Content includes the application of pharmacology, classifications of drugs and their usage, mechanism of action, side effects, and dosing. Preparation and administration of medications, interpreting prescriptions. Veterinary management and practice dispensing medication are also addressed.	
CREDITS: 3.00	

VET 4033	Animal Disease and Prevention II
Completes the Animal Disease and Prevention I course, focus on basic and clinical aspects of the disease, disease transmission, clinical signs and diagnosis of diseases in different groups of animals, birds, poultry and wildlife. The methods used in the control and prevention of disease will be discussed including the importance of vaccination and the types of vaccines available in disease prevention and control.	
CREDITS: 3.00	

VET 4113	Infectious Diseases and Animal Quarantine
Provides the essential information on the major infectious diseases of different animal species caused by viral, bacterial, fungal and parasitic infections as well as arthropod vector biology and vector-borne diseases. It covers the zoonoses, the pathogenesis, clinical signs, the host-pathogen interactions, mode of disease transmission and means of prevention and control. Various strategies of detecting and confirming and managing disease outbreaks will be discussed as well as the principles of animal quarantine and biosecurity.	
CREDITS: 3.00	

VET 4123	Veterinary Epidemiology and Public Health
Introduces students to the basic concepts of veterinary epidemiology, the concept of disease occurrence as a complex interaction between host, agent and environmental factors, present descriptive epidemiology exercises on the strengths and weaknesses of different epidemiological study designs. The quality of evidence of causal relationships provided by different epidemiological study designs will be compared and discussed.	
CREDITS: 3.00	

VET 4133	Wildlife and Aquaculture
Provides students with the opportunity to learn and apply the principles of wildlife and aquaculture husbandry, handling, welfare, health care and management. In addition, it will provide students with the opportunity to learn and apply the principles of wildlife and aquaculture disease ecology, conservation medicine and ecohealth and conservation practice.	
CREDITS: 3.00	

VET 4223	Veterinary Legislations and Animal Welfare
Provides students with the principles and applications of animal welfare, legislation and ethics concepts in a wide range of situations with farm animal practice, transport and slaughter, companion animals, laboratory animals, animals used in competition and wildlife or for scientific research.	
CREDITS: 3.00	

VET 4909	Veterinary Practicum IV Capstone Project
Provides an opportunity for the Vet students to study a specific area from the four major areas in the Vet program. Students are expected to utilize knowledge learned in the four years of the program and Practicum experiences to select an area of interest to investigate, choose appropriate methodology, collect and analyze data and present conclusions in a final capstone presentation.	
CREDITS: 9.00	

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