MARINE ENGINEERING TECHNOLOGY : BACHELOR OF APPLIED SCIENCE

Overview

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 program 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 Learning Outcomes

Upon graduation, a HCT graduate in Bachelor of Applied Science in Marine Engineering Technology should have the ability to:

1. Demonstrate the competency to undertake the tasks, duties and responsibilities of a ship's chief engineer
2. Demonstrate a knowledge base in relevant marine related topics suitable for a career as a marine professional
3. Effectively lead, work and communicate in a team
4. Expand knowledge and capabilities through continuing education or other lifelong learning experiences.

Requirements

Completion Requirements

Students seeking the Bachelor of Applied Science in Marine Engineering Technology must successfully complete the following requirements:

1. Minimum of 169 credits which are divided as follows:
   a. Major requirements of 100 credits as specified by program core requirements.
   b. General Engineering Core Courses: 6 credits.
   c. Sea Time Courses: 30 credits.
   d. General Studies requirements of 33 credits according to the General Studies breakdown.
2. Minimum CGPA of 2.00.

Code	Title	Credit Hours
Marine Engineering Core Courses		
Required Credits: 100		
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 Airconditioning 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 1003	Maritime English 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
General Engineering Core Courses		
Required Credits: 6		
EGN 1133	Design Thinking in Technology	3
MCE 2403	Thermodynamics	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
General Studies		
Required Credits: 33		
English, Arabic or other Languages		
Required Credits: 12		
Humanities or Arts		
Required Credits: 3		
Information Technology and Mathematics		
ICT 2013 and LSM 1103		
Required Credits: 6		
The Natural Sciences		
PHY 1103		
Required Credits: 3		

The Social or Behavioral Sciences
Required Credits: 9

Description	Data
Total Required Credits	169
Maximum Duration of Study	7 years
Cost Recovery Program	Yes
Minimum Duration of Study	5 years
Program Code	MAREG
Major Code	MET

Ideal Study Plan
Recommended Sequence of Study

Year 1		
Semester 1		**Credit Hours**
EGN 1133	Design Thinking in Technology	3
LSM 1103	Technical Mathematics	3
LSS 1003	Life and Future Skills	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
PHY 1103	Physics I	3
	Credit Hours	22
Semester 2		
MET 1210	Marine Engineering Seatime I *	10
	Credit Hours	10
Year 2		
Semester 1		
AES 1013	Arabic Communications I	3
LSC 1103	Professional Communication and Reporting	3
MET 2303	Mathematics for Marine Engineering	3
MET 2313	Marine Engineering 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
	Credit Hours	22
Semester 2		
LSC 2103	Academic Reading and Writing II	3
MCE 2403	Thermodynamics	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
	Credit Hours	20
Year 3		
Semester 1		
MET 3510	Marine Engineering Seatime II	10
	Credit Hours	10
Semester 2		
AES 1003	Emirati Studies	3
ICT 2013	Computational Thinking and Coding	3
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
	Credit Hours	21
Year 4		
Semester 1		
MET 4710	Marine Engineering Seatime III **	10
	Credit Hours	10
Semester 2		
LSS 1123	Basic Research Methods	3
MET 4804	Engineering Knowledge - Diesel	4
MET 4814	Engineering Knowledge - Steam	4
MET 4823	Marine Airconditioning and Refrigeration	3
MET 4833	Marine Engineering Control II	3
MET 4843	Marine Electrical Systems II	3
	Credit Hours	20
Year 5		
Semester 1		
BUS 2403	Innovation and Entrepreneurship	3
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
	Credit Hours	18
Semester 2		
AES 3003	Professional Arabic	3
MET 5005	Leadership for Chief Engineers	5
MET 5014	Marine Machinery Operations	4
MET 5024	Advanced Ship Regulation and Survey	4
	Credit Hours	16
	Total Credit Hours	169

*Students need to take the following STCW Basic Safety Training courses before MET 1210:

- Elementary First Aid
- Fire Prevention and Fire Fighting
- Personal Safety & Social Responsibilities
- Personal Survival Techniques
- Security Awareness Training

**Students need to take the following STCW Basic Safety Traning Courses before MET 4710:

- Advanced Fire Fighting
- Medical First Aid
- Proficiency in Survival Craft & Rescue Boats