

MARINE ENGINEERING TECHNOLOGY : BACHELOR OF APPLIED SCIENCE

Overview

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

Bachelor of Applied Science in Marine Engineering Technology

Students must successfully complete a minimum of 169 credits, including:

Code	Title	Credit Hours
Program Core Courses		100
Sea Time Core Courses		30
General Engineering Courses		6
General Studies course		33
Total Credit Hours		169

Code	Title	Credit Hours
Marine Engineering Core Courses		
Required Credits: 100		
MAR 1113	Fabrication and Repair I	3
MAR 1122	Introduction to Marine Engineering	2
MAR 1132	Marine Chemistry	2

MAR 2303	Mathematics for Marine Engineering	3
MAR 2313	Marine Engineering Knowledge	3
MAR 2403	Fluid Mechanics for Marine Engineering	3
MAR 2413	Applied Marine Mechanics I	3
MAR 2423	Ship Stability	3
MAR 2433	Fabrication and Repair II	3
MAR 2442	Marine Material Technology I	2
MAR 3603	Applied Marine Mechanics II	3
MAR 3613	Ship Construction	3
MAR 3623	Marine Engineering Control I	3
MAR 3633	Marine Electrical Systems I	3
MAR 3643	Diesel Engine Maintenance	3
MAR 4804	Engineering Knowledge - Diesel	4
MAR 4814	Engineering Knowledge - Steam	4
MAR 4823	Marine Airconditioning and Refrigeration	3
MAR 4223	Marine Engineering Control II	3
MAR 4843	Marine Electrical Systems II	3
MAR 5005	Leadership for Chief Engineers	5
MAR 5014	Marine Machinery Operations	4
MAR 5024	Advanced Ship Regulation and Survey	4
MAR 5903	Marine Material Technology II	3
MAR 5914	Ship Design and Technology	4
MAR 5924	Advanced Marine Engineering Knowledge	4
MAR 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

MAR 1210	Marine Engineering Seetime I	10
MAR 3510	Marine Engineering Seetime II	10
MAR 4710	Marine Engineering Seetime III	10

General Studies

Required Credits: 33

English, Arabic or other Languages

Required Credits: 12

LSC 1103, AES 1013, AES 1033 and LSC 2193

Humanities or Arts

Required Credits: 3

AES 1003

Information Technology and Mathematics

Required Credits: 6

ICT 2013 and LSM 1103

The Natural Sciences

Required Credits: 3

PHY 1103

The Social or Behavioral Sciences

Required Credits: 9

LSS 1003, LSS 1123 and BUS 2403

Description	Data
Total Required Credits	169
Maximum Duration of Study	7 years
Minimum Duration of Study	5 years
Cost Recovery Program	Yes
Program Code	BMAREG
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
MAR 1113	Fabrication and Repair I	3
MAR 1122	Introduction to Marine Engineering	2
MAR 1132	Marine Chemistry	2
MTR 1003	Maritime English Communication	3
PHY 1103	Physics I	3
Credit Hours		22

Semester 2

MAR 1210	Marine Engineering Seatime I *	10
Credit Hours		10

Year 2

Semester 3		Credit Hours
AES 1013	Arabic Communications I	3
LSC 1103	Professional Communication and Reporting	3
MAR 2303	Mathematics for Marine Engineering	3
MAR 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 4

AES 1033	Islamic Culture	3
MCE 2403	Thermodynamics	3
MAR 2403	Fluid Mechanics for Marine Engineering	3
MAR 2413	Applied Marine Mechanics I	3
MAR 2423	Ship Stability	3
MAR 2433	Fabrication and Repair II	3
MAR 2442	Marine Material Technology I	2
Credit Hours		20

Year 3

Semester 5		Credit Hours
MAR 3510	Marine Engineering Seatime II	10
Credit Hours		10

Semester 6

AES 1003	Emirati Studies	3
ICT 2013	Computational Thinking and Coding	3
MAR 3603	Applied Marine Mechanics II	3
MAR 3613	Ship Construction	3
MAR 3623	Marine Engineering Control I	3

MAR 3633	Marine Electrical Systems I	3
MAR 3643	Diesel Engine Maintenance	3
Credit Hours		21

Year 4

Semester 7		Credit Hours
MAR 4710	Marine Engineering Seatime III **	10
Credit Hours		10

Semester 8

LSS 1123	Basic Research Methods	3
MAR 4804	Engineering Knowledge - Diesel	4
MAR 4814	Engineering Knowledge - Steam	4
MAR 4823	Marine Airconditioning and Refrigeration	3
MAR 4223	Marine Engineering Control II	3
MAR 4843	Marine Electrical Systems II	3
Credit Hours		20

Year 5

Semester 9		Credit Hours
LSC 2193	Applied Skills Capstone	3
MAR 5903	Marine Material Technology II	3
MAR 5914	Ship Design and Technology	4
MAR 5924	Advanced Marine Engineering Knowledge	4
MAR 5934	Marine Engineering Project	4
Credit Hours		18

Semester 10

BUS 2403	Innovation and Entrepreneurship	3
MAR 5005	Leadership for Chief Engineers	5
MAR 5014	Marine Machinery Operations	4
MAR 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 MAR 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 Training Courses before MAR 4710:

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

Faculty and Academic Staff

Farhan saeed, PHD Maritime Education & Training (Nautical), Liverpool John Moores University, UK

Isikeli Waqa, Masters Edu. / Curriculum & Technology, Malmo University, Sweden

Lalin De Silva, Masters Maritime Education and Training (Nautical), World Maritime University, Sweden

Saud Zanbarkji, Masters High Sea's, Arab Academy for Science and Technology and Maritime Transport, Egypt