MARITIME ENGINEERING TECHNOLOGY AND NAVAL ARCHITECTURE : BACHELOR OF APPLIED SCIENCE

Overview

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; shipowners, and ports.

Program Goals

The aim of the program is to produce engineering professionals' to work in the wide rage of maritime related industries in the UAE. The curriculum is designed to ensure that each graduate enters the UAE offshore and naval architecture related industry with the unique combination of education and professional skills required by naval architects and maritime engineers.

In addition to the generic graduate outcomes related to graduates of the Higher Colleges of Technology, students, upon completion of the program, will be able to:

- Demonstrate a knowledge base in maritime engineering and naval architect which is suitable for a naval architecture related career and/or maritime engineer career.
- Employ the necessary communication, maritime engineering and naval architecture skills to safely design or conduct naval structure surveys.
- Show appropriate officer-like qualities of discipline, leadership, management and teamwork.
- Manage and reflect on their own work, lifelong-learning and professional development.

Program Learning Outcomes

Upon graduation, a HCT graduate in Bachelor of Applied Science in Maritime Engineering Technology and Naval Architecture should have the ability to:

1. Carry out a wide range of maritime engineering and ship design functions
2. Analyze the performance of ships and maritime structures
3. Conduct ship surveys
4. Effectively lead, work and communicate in a team
5. Expand knowledge and capabilities through continuing education or other lifelong learning experiences
6. Serve the community, whether locally, nationally, or globally

Requirements

Completion Requirements

Bachelor of Applied Science in Maritime Engineering Technology and Naval Architecture

Students must successfully complete a minimum of 139 credits, including:

Code	Title	Credit Hours
Program Core Courses		32
Program Elective Courses		12
Mathematics and Science Courses		21
General Engineering Core Courses		41
General Studies courses		33
Total Credit Hours		**139**

Code	Title	Credit Hours
Maritime Engineering 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 Manoeuvring	3
MAR 4865	Maritime Design Project II	5
MAR 4883	Maritime Transportation	3
General Engineering Core Courses		
Required Credits: 41		
EGN 1133	Design Thinking in Technology	3
EGN 2101	Computer Aided Drafting	1
EGN 3012	Project Management	2
EGN 3212	Economics for Engineering	2
EGN 3806	Work Placement II	6
ELE 2153	Electrical Eng 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 2323	Manufacturing Technology I	3
MCE 2403	Thermodynamics	3
MCE 3343	Industrial Plant Maintenance	3
MCE 3403	Fluid Mechanics	3
Maritime Engineering 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: 21		
CHM 1103	Engineering Chemistry	3
MTH 1103	Pre Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Introduction to Differential Equations	3
MTH 3013	Calculus III	3
PHY 1203	Physics II	3
General Studies		
Required Credits: 33		
English, Arabic or other Languages		
Required Credits: 12		
LSC 1103, AES 1013, AES 1033 and LSC 2223		
Humanities or Arts		
Required Credits: 3		
AES 1003		
Information Technology and Mathematics		
Required Credits: 6		
ICT 2013 and MTH 1113		
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	139
Maximum Duration of Study	6 years
Minimum Duration of Study	4 years
Cost Recovery Program	No
Program Code	BMENBP
Major Code	MAR

Ideal Study Plan

Recommended Sequence of Study

Year 1

Semester 1		**Credit Hours**
EGN 1133	Design Thinking in Technology	3
LSC 1103	Professional Communication and Reporting	3
LSS 1003	Life and Future Skills	3
MTH 1103	Pre Calculus	3
PHY 1103	Physics I	3
	Credit Hours	**15**
Semester 2		
AES 1033	Islamic Culture	3
LSS 1123	Basic Research Methods	3
MTH 1113	Statistics for Engineering	3
MTH 1203	Calculus I	3
PHY 1203	Physics II	3
	Credit Hours	**15**
Summer		
AES 1013	Arabic Communications	3
CHM 1103	Engineering Chemistry	3
	Credit Hours	**6**
Year 2		
Semester 3		
AES 1003	Emirati Studies	3
ELE 2153	Electrical Eng Fundamentals	3
MCE 2203	Applied Statics	3
MCE 2303	Material Selection and Testing	3
MCE 2311	Solid Modelling	1
MTH 2103	Calculus II	3
	Credit Hours	**16**
Semester 4		
MCE 2213	Mechanics of Materials	3
MCE 2223	Applied Dynamics	3
MCE 2323	Manufacturing Technology I	3
MCE 2403	Thermodynamics	3
MCE 3403	Fluid Mechanics	3
MTH 2503	Introduction to Differential Equations	3
	Credit Hours	**18**
Summer		
MCE 3343	Industrial Plant Maintenance	3
	Credit Hours	**3**
Year 3		
Semester 5		
EGN 3012	Project Management	2
EGN 3212	Economics for Engineering	2
LSC 2223	Future Skills Capstone	3
MAR 2203	Naval Architecture	3
MAR 3103	Marine Machinery Systems	3
MTH 3013	Calculus III	3
	Credit Hours	**16**
Semester 6		
BUS 2403	Innovation and Entrepreneurship	3
ICT 2013	Computational Thinking and Coding	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
	Credit Hours	**16**
Summer		
EGN 3806	Work Placement II	6
	Credit Hours	**6**
Year 4		
Semester 7		
MAR 4805	Maritime Design Project I	5
MAR 4833	Seakeeping and Manoeuvring	3
2 Elective Course		6
	Credit Hours	**14**
Semester 8		
MAR 4865	Maritime Design Project II	5
MAR 4883	Maritime Transportation	3

2 Elective course	6
Credit Hours	**14**
Total Credit Hours	**139**

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

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

Tariq Ajluni ,Bachelor ,Nautical Technology ,Arab Academy for Sci & Tech ,Egypt