

MECHANICAL ENGINEERING TECHNOLOGY (DMCET) : DIPLOMA

Diploma in Mechanical Engineering Technology (DMCET)

Program Mission

The 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.

Program Goal

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 Learning Outcomes

Upon graduation, a HCT graduate in Diploma in Mechanical Engineering Technology should demonstrate:

1. An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the Mechanical Engineering Technology.
2. An ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the Mechanical Engineering Technology.
3. An ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.
4. An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results.
5. An ability to function effectively as a member of a technical team.

Requirements

Completion Requirements

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

1. A minimum of 81 credits, as follows:
 - a. a minimum requirement of 39 credits in the program major, including Work Placement for 8 weeks
 - b. a minimum requirement of 15 credits in Math and Science courses.
 - c. a minimum requirement of 27 credits in General Studies, according to the General Studies breakdown and as advised in the study plan of the program.
2. A minimum CGPA of 2.00.

Code	Title	Credit Hours
Mechanical Engineering Core Courses		
Required Credits: 39		
EGN 1133	Design Thinking in Technology	3
EGN 2806	Work Placement I	6
ELE 2153	Electrical Eng 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		
Required Credits: 27		
English, Arabic or other Languages		
Required Credits: 9		
Humanities or Arts		
AES 1003		
Required Credits: 3		
Information Technology and Mathematics		
ICT 2013 and MTH 1113		
Required Credits: 6		
The Natural Sciences		
PHY 1103		
Required Credits: 3		
The Social or Behavioral Sciences		
Required Credits: 6		
Description	Data	
Total Required Credits	81	
Maximum Duration of Study	3 years	
Cost Recovery Program	No	
Minimum Duration of Study	2 years	

Program Code	DMCET
Major Code	MCE

Ideal Study Plan

Recommended Sequence of Study

Year 1		Credit Hours
Semester 1		
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		
LSC 2103	Academic Reading and Writing II	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 I	3
CHM 1103	Engineering Chemistry	3
Credit Hours		6
Year 2		
Semester 1		
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 2		
ICT 2013	Computational Thinking and Coding	3
MCE 2213	Mechanics of Materials	3
MCE 2323	Manufacturing Technology I	3
MCE 2332	Geometric Dimensioning and Tolerancing	2
MCE 2403	Thermodynamics	3
MCE 2903	Sophomore Design Project	3
Credit Hours		17
Summer		
EGN 2806	Work Placement I *	6
MCE 3343	Industrial Plant Maintenance	3
MCE 3613	Fluid Power	3
Credit Hours		12
Total Credit Hours		81

*Work Placement I shall start after year 2 Summer Semester is completed.