



كلية الشرق الأوسط  
Middle East College

## **Bachelor of Engineering (Hons) Civil Engineering**

### **1. ESSENTIAL QUALITIES AND ATTRIBUTES OF THE PROGRAMME'S GRADUATES**

This programme aims to prepare students with the necessary knowledge and skills for them to achieve competence in core areas relating to civil Engineering. Throughout the programme students will study modules that will give them the necessary skills to analyse, design and manage solutions for innovative and complex engineering problems as a basis for future leadership in the civil engineering profession

### **2. RATIONALE OF THE PROGRAMME**

Civil engineering is a challenging, demanding and rewarding profession, and will enable students to contribute to the present and future well-being of modern and developing societies throughout the world. Omani construction is growing at a rapid pace and there is a need for a quality programme that prepares students to address the growing needs of this industry. The construction industry which includes engineering modelling, concepts and theories of structural mechanics, soil mechanic, and an understanding of construction materials and their strengths is a rapidly growing sector. As a result, there is an increasing demand for candidates proficient in this specialization.

The curriculum provides knowledge and skills in different areas of civil engineering in a well-structured manner and provides a comprehensive understanding of the various civil engineering topics involved. Further it ensures improvement of the students' logical thinking skills and analytical capability. The programme lays emphasis on specialized areas within civil engineering such as structural mechanics, soil mechanics, hydraulics, strength, and contraction methods. The programme is a blend of theory and practice by means of laboratory experiments that employ the required equipment and materials and use a simulated environment. Subject areas such as surveying, construction methods etc., require the student to gain onsite exposure as well.

The programme deals with the overall development and design solutions in response to civil engineering challenges, it ensures students apply problem-solving skills in engineering applications including those calling for the use of more advanced principles of applied mechanics,



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formulation of plans for undertaking programmes of civil engineering work at a range of scales and Integrate knowledge and understanding gained from the course and from other personal or educational experience, to achieve practical ends.

The programme is aimed at developing the ability to apply engineering principles to the solution of practical problems, the ability to Identify, analyze, and solve practical civil engineering problems, the ability to apply knowledge of Environmental, Geotechnical, Structural, Transportation, and Water Resources Engineering to design of civil engineering projects. The programme is aimed at preparing the student to communicate effectively with their peers, other professionals, decision makers, and Practice civil engineering in a professionally responsible and ethical manner.

### **3. PROGRAMME LEARNING OUTCOMES**

On completion of the programme, graduating engineering students are expected to be able to demonstrate:

- Basic mathematical methods including those needed for modelling engineering problems.
  - Concepts, theories, relevant principles of applied mechanics in the main areas of structural mechanics, soil mechanics and hydraulics, and more advanced principles in chosen areas.
  - The principles of civil engineering design, and, depending on choice of route and modules, their application to complex problems requiring multi-disciplinary solutions.
  - Strong understanding of common construction materials.
  - Management practice in the context of civil engineering projects.
  - Civil engineering construction methods.
- Surveying and setting out.



## **B Eng (Hons) Civil Engineering**

	Year 1	C.P	Year 2	C.P	Year 3	C.P	Year 4	C
<b>Fall Semester</b>	Mathematics and Statistics	15	Communication	15	Project Management	15	Railway Engineering	1
	English for Engineering	15	Engineering Mathematics 1	15	Engineering Mathematics 2	15	Structural Mechanics 3	1
	Engineering Science	15	Applied Geology	15	Geotechnology 1	15	Geotechnology 2	1
	Introduction to Civil Engineering	15	Structural Mechanics 1	15	Materials 2	15	PROJECT (Part A)	1
		60		60		60		6
<b>Spring Semester</b>	Engineering Surveying 1	15	Introduction to Environmental Engineering	15	Oman Environment Studies	15	Civil Engineering Design	1
	Civil Engineering Construction 1	15	Civil Engg Practice	15	Highway and Transport Engineering	15	Hydraulics 2	1
	Design and Visualisation	15	Hydraulics 1	15	Structural Design	15	Concrete and Concrete Structures	1
	Materials 1	15	PROJECT 1	15	Structural Mechanics 2	15	PROJECT (Part B)	1
		60		60		60		6
	<i>Certificate in Civil Engineering</i>		<i>Diploma in Civil Engineering</i>		<i>Advanced Diploma in Civil Engineering</i>		<i>BEng (Hons) Civil Engineering</i>	