



SPECIALIST CERTIFICATIONS

- Structures
- Virtual Design and Construction
- Project Collaboration Management
- Transportation and Geotechnics

SCHOOL OF ENGINEERING



CIVIL ENGINEERING

The Civil Engineering Undergraduate Program strengthens the construction industry and offers students a solid training in design and construction with great technical soundness. Moreover, students will learn to lead task forces, manage processes and costs, and develop eco-friendly projects that provide creative and innovative responses to the global construction sector.

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	NIVEL 7	LEVEL 8	LEVEL 9	LEVEL 10
BASIC MATHEMATICS 5	CALCULUS I 5	CALCULUS II 4	DIFFERENTIAL EQUATIONS 4	DIGITAL PROGRAMMING 3	BUILDING INSTALLATIONS 5	FLUID MECHANICS 4	HYDRAULICS 4	HYDROLOGY 4	METAL STRUCTURES 5
PERSONAL AND SOCIAL DEVELOPMENT 3	LINEAR ALGEBRA 3	APPLIED CHEMISTRY 3	CONCRETE TECHNOLOGY 3	STATICS 4	COSTING AND BUDGETING 3	CONSTRUCTION PROJECT MANAGEMENT 4	OPERATION AND MAINTENANCE PROJECT MANAGEMENT 3	RESEARCH SEMINAR I 4	RESEARCH SEMINAR II 4
INTRODUCTION TO ENGINEERING 3	ECONOMICS AND BUSINESS 3	TOPOGRAPHY 3	PHYSICS II 4	CONSTRUCTION TECHNOLOGY II 4	MATERIALS TECHNOLOGY 3	NUMERICAL METHODS 3	EARTHQUAKE-RESISTANT ENGINEERING 4	REINFORCED CONCRETE II 3	SUSTAINABLE INFRASTRUCTURES 3
LANGUAGE AND COMMUNICATION I 4	LANGUAGE AND COMMUNICATION II 3	GRAPHIC ENGINEERING 3	BUILDING INFORMATION MODELING I 4	BUILDING INFORMATION MODELING II 4	RESISTANCE OF MATERIALS 5	STRUCTURAL ANALYSIS I 4	STRATEGIC CONTRACT MANAGEMENT 3	WATER SUPPLY AND SANITATION 3	REAL ESTATE MANAGEMENT AND DEVELOPMENT 3
RESEARCH METHODOLOGIES 3	PHILOSOPHY TOPICS 3	APPLIED STATISTICS AND PROBABILITY 3	CONSTRUCTION TECHNOLOGY I 4	DYNAMICS 4	ENVIRONMENTAL ENGINEERING 3	TRANSPORTATION ENGINEERING I 3	REINFORCED CONCRETE I 4	BRIDGES 3	MASONRY 3
CIVIC ETHICS 2	SOCIAL AND POLITICAL PROCESSES 3	PHYSICS I 4	APPLIED GEOLOGY 4	SOIL MECHANICS I 4	SOIL MECHANICS II 4	FUNDAMENTALS OF URBAN AND REGIONAL PLANNING 3	QUALITY MANAGEMENT 3	MANAGEMENT OF OCCUPATIONAL HEALTH AND SAFETY 3	PROJECT RISK MANAGEMENT 3
MANDATORY CREDITS 20	MANDATORY CREDITS 20	APPLIED ARTIFICIAL INTELLIGENCE * 3	MANDATORY CREDITS 23	MANDATORY CREDITS 23	MANDATORY CREDITS 23	ETHICS, LEADERSHIP, AND SOCIAL RESPONSIBILITY 2	VIRTUAL DESIGN AND CONSTRUCTION 3	PRESTRESSED CONCRETE 3	TRANSPORTATION ENGINEERING II 3
		MANDATORY CREDITS 23				MANDATORY CREDITS 23	STRUCTURAL ANALYSIS II 3	TUNNELS 3	WATER RESOURCES ENGINEERING 3
							GEOMATICS 3	DISASTER RISK MANAGEMENT 3	PAVEMENTS 3
							MANDATORY CREDITS 18	GEOTECHNICS FOR TRANSPORTATION INFRASTRUCTURE 3	OCCUPATIONAL SAFETY, HEALTH, AND ORGANIZATIONAL WELL-BEING 3
								CONSTRUCTION PRODUCTIVITY 3	MANDATORY CREDITS 9
								MANDATORY CREDITS 8	

Mandatory subjects of the General Studies Program

Mandatory subjects of the Civil Engineering Undergraduate Program

Elective subjects of the Civil Engineering Undergraduate Program

Subjects in common among the undergraduate programs of the School



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****The School of Engineering comprises the Civil Engineering, Industrial Engineering, Systems Engineering, Mechatronics Engineering, and Environmental Engineering undergraduate programs.**

CREDIT SUMMARY	CREDITS	TYPE OF CREDIT
General Studies	40	Mandatory
School	150	Mandatory
Total Elective Subjects	15	Elective
Total Credits	205	

Subject to curricular change.