Al-Iraqia University
الجامعة العراقية

First Cycle – Bachelor's degree (B.Eng.) – Civil engineering

بكالوريوس هندسة - الهندسة المدنية

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1. Mission & Vision Statement

Vision Statement

To produce engineers having professional and leadership qualities with capacity to take up professional and research assignments in Civil Engineering and allied fields with focus on inter-disciplinary and innovative approach and to compete at the global level.

Mission Statement

- Create and develop sustained environment of learning, to nurture the students into highly skillful and ethical professionals by imparting quality education with social obligations.
- To establish collaborative partnerships with academic, research and industrial entities to provide a knowledge base for existing and emerging technologies to enhance the skills innovativeness, management skills and lifelong learning in civil engineering students.
- To provide students with the principles and methodologies needed for civil engineering practice and prepare students for leadership roles in Civil Engineering.

2. Program Specification

Programme code:	BEng-CE	**ECTS**	240
Duration:	4 levels, 8 Semesters	**Method of Attendance:**	Full Time

The goal of civil engineering is to design the constructed and natural environments that people live in. The structures that sustain and enclose us are at issue. It concerns how we develop in relation to the environment, how we protect ourselves from it, and how we protect the environment from us. In addition to having a high level of expertise, civil engineers must also be creative, inclusive, open-minded, and capable of taking charge when necessary. The Civil engineering program has been developed to give graduates an adequate technical foundation in all of the major fields of the modern Civil Engineering profession by delivering a coherent, coordinated, and balanced degree program that integrates fundamental engineering science with practical application. It will allow students to build a sophisticated understanding of the context in which engineering projects are generated. It will also help students improve their oral, written, and graphic communication skills. Students will be given enough time to investigate the topic, conduct self-directed study, and consider the concerns and challenges of the content, with additional time for self-directed study gradually increasing over the four years as a better preparation for professional practice. The curriculum covers all aspects of the highly complex field of civil engineering, including structural engineering, project management for building projects, and infrastructure facilities including sewage networks, dams, highways, and bridges. It also includes sanitary and environmental engineering as well as water resources engineering. And soil methods as well as contemporary geomatics engineering and remote sensing methods, in line with the Department's research units.

3. Program Goals

1. To equip students with the knowledge of analyzing data and technical concepts pertaining to the development of infrastructure, design, sustainability, construction management and any other field related to civil engineering.
2. To perform their/duties efficiently, effectively and ethically at individual level and also at group level in a multidisciplinary team, contributing to the welfare of the society.
3. To adopt a new innovative technology by continuously updating their knowledge through lifelong learning achieving the personal and organization growth.

4. Student Learning Outcomes

Upon successful completion of this program, graduates will typically have:

Outcome 1

An ability to identify, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

Outcome 2

An ability to communicate effectively with a range of audiences.

Outcome 3

An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors

Outcome 4

An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.

Outcome 5

An ability to develop and conduct appropriate experimentation analyzes and interprets data, and use engineering judgment to draw conclusions.

Outcome 6

An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

Outcome 7

An ability to acquire and apply new knowledge as needed, using appropriate learning strategies

5. Academic Staff

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6. Credits, Grading and GPA

Credits

Al Iraqia University is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 30 ECTS per semester. 1 ECTS is equivalent to 25 hrs student workload, including structured and unstructured workload.

Grading

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

GRADING SCHEME مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب - قيد المعالجة	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				
Number Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

Calculation of the Cumulative Grade Point Average (CGPA)

1. The CGPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

   CGPA of a 4-year B.Sc. degree:

   CGPA = [(1st module score x ECTS) + (2nd module score x ECTS) + ……] / 240

7. Curriculum/Modules

Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UI100	Human Rights	32	18	2.00	S	
UICE101	Engineering Mechanics I	62	113	7.00	C	
UICE102	Mathematics I	62	88	6.00	B	
UICE103	Construction Materials	64	86	6.00	C	
UICE104	Physics for Engineers	62	63	5.00	B	
UICE105	Engineering Drawing	62	38	4.00	C	

Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UICE200	Workshop technology	47	53	4.00	S	
UI201	English Language	32	68	4.00	S	
UICE202	Engineering Mechanics II	62	88	6.00	C	UICE101
UICE203	Mathematics II	62	88	6.00	S	UICE102
UICE204	Engineering Geology	47	78	5.00	B	
UICE205	Computer Aided Graphics	62	63	5.00	C	

Semester 3 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UICE300	Computer Programming	47	53	4.00	S	
UICE301	Mechanics of Materials I	63	112	7.00	C	UICE102, UICE202
UICE302	Engineering Surveying, I	77	73	6.00	C	
UICE303	Concrete Technology	78	47	5.00	C	
UICE304	Fluid Mechanics	63	62	5.00	C	
UICE305	Probability and Statistics	32	43	3.00	C	

Semester 4 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UICE400	Engineering Surveying II	78	72	6.00	C	UICE302
UICE401	Mechanics of Materials II	62	88	6.00	C	UICE301
UICE402	Hydrology and Hydraulics	78	72	6.00	C	UICE304
UICE403	Building Construction	47	53	4.00	C	
UICE404	Engineering Management & Economics	48	52	4.00	C	
UICE405	Engineering Mathematics	47	53	4.00	B	UICE203

Semester 5 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UICE500	Structural Analysis I	62	63	5.00	C	UICE301
UICE501	Soil Mechanics I	77	73	6.00	C	
UICE502	Numerical Methods	47	53	4.00	B	UICE102
UICE503	Building Services	47	53	4.00	C	
UICE504	Sanitary Engineering and Plumbing Design I	77	48	5.00	C	UICE304
UICE505	Reinforced Concrete Design I	62	88	6.00	C	UICE301

Semester 6 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UICE600	Sanitary Engineering and Plumbing Design II	63	62	5.00	C	UICE304
UICE601	Reinforced Concrete Design II	62	88	6.00	C	UICE505
UICE602	Soil Mechanics II	78	72	6.00	C	UICE501
UICE603	Traffic Engineering	62	63	5.00	C	
UICE604	Structural Analysis II	62	63	5.00	C	UICE500
UICE605	Computer Application in Civil Engineering	47	28	3.00	C	

Semester 7 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UICE700	Design of steel structure I	62	63	5.00	C	UICE604
UICE701	Reinforced Concrete Design III	62	63	5.00	C	UICE601
UICE702	Foundation Engineering I	62	63	5.00	C	UICE501
UICE703	Transportation Engineering	63	62	5.00	C	UICE603
UICE704	Project in Civil Eng. (1)	92	58	6.00	C	
UICE705	CE Elective (1)	47	53	4.00	E	

Semester 8 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UICE800	Design of steel structure II	62	88	6.00	C	UICE700
UICE801	Foundation Engineering II	62	88	6.00	C	UICE702
UICE802	Project in Civil Eng. (2)	92	108	8.00	C	UICE704
UICE803	Quantity Survey	62	63	5.00	C	
UICE804	CE Elective (2)	62	63	5.00	E	

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