



NO.:

DATE:

العدد: ٢٢ / ١ / ٢٢٢٢  
التاريخ: ٤ / ٤ / ٢٠٢٤

الى / رئاسة جامعة بغداد

قسم ضمان الجودة والاداء الجامعي

م / وصف البرنامج الاكاديمي والمقرر الدراسي

تحية طيبة....

اشارة الى كتابكم ذي العدد 1012 في 2024/1/28 الخاص بدليل وصف البرنامج الاكاديمي والمقرر الدراسي للعام الدراسي (2023/2022).

نرفق لكم طياً نسخة من وصف البرنامج الاكاديمي للاقسام العلمية كافة والمصادق عليها من قبل السيد عميد كلية الهندسة وعلى قرص مدمج (CD).

للتفضل بالاطلاع.

مع التقدير.

المرفقات/

• قرص مدمج (CD).

  
أ.د. هسان حميد عبد المجيد

عميد كلية الهندسة

نسخة منه الى/

- مكتب السيد العميد/ للتفضل بالاطلاع. مع التقدير.
- شعبة ضمان الجودة وتقويم الاداء/ مع الاوليات.



NO.: العدد: ٢٠٢٣ / ١ / ٤  
DATE: التاريخ: ٢٠٢٣ / ٤ / ٢

الى / السيد عميد كلية الهندسة المحترم  
م / الوصف الاكاديمي

تحية طيبة...

نرفق لكم طياً النسخة الورقية لملف الوصف الاكاديمي لقسم الهندسة المدنية للعام  
الدراسي ٢٠٢٢/٢٠٢٣ لغرض مصادقة الكلية.

للتفضل بالاطلاع والتنسيب ..... مع التقدير

المرفقات///

• النسخة الورقية

ا.د. أمجد حمد خليل

رئيس قسم الهندسة المدنية



## Academic Program Description Form

University Name: *University of Baghdad.*

Faculty/Institute: *Colleg.c... of Engineering.*

Scientific Department: *... Civil Engineering Department.*

Academic or Professional Program Name: *Civil Engineering Science*

Final Certificate Name: *B.Sc. degree in Civil Engineering*

Academic System: *Annual*

Description Preparation Date: *01/09/2022*

File Completion Date: *01/10/2022*

Signature:



Head of Department Name:

*Prof. Dr. Amjad Hamad Albayati*

Date:

Signature:



Scientific Associate Name:

*Asst. Prof. Dr. Dhiaa Jasim Kadhim*

Date:

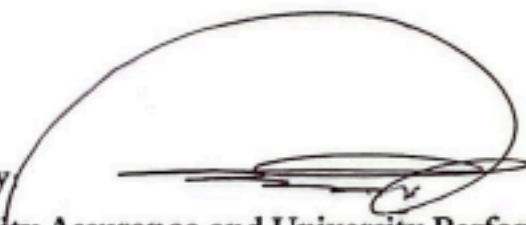
The file is checked by

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: *Asst. Prof. Dr. Meervat Altaie*

Signature:



Approval of the Dean

**PROGRAMME SPECIFICATION**

This program specification provides a concise summary of the main program features and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the program.

1. Teaching Institution	College of Engineering <u>University of Baghdad</u>
2. University Department/Centre	Civil Engineering Department (CED)
3. Program Title	Civil Engineering Science
4. Title of Final Award	B. Sc. degree in Civil Engineering
5. Modes of Attendance offered	Annual System; There is only one mode of delivery, which is a “Day Program”. The students are full time Students, and on campus. They attend full day program in face-to-face mode. The academic year is composed of 30-week regular subjects.
6. Accreditation	Ministry of Higher Education & Scientific Research
7. Other external influences	---
8. Date of production/revision of <u>this specification</u>	01/10/2022
9. Aims of the Program	

Preparing scientific and professional distinction engineering cadres with an efficiency that qualifies them to provide comprehensive scientific service for the construction process and engineering project management. This included wide range of specializations in construction and bridge engineering, foundations engineering, roads and transportation, engineering management, materials technology, sanitary engineering, sewage networks, water networks, filtering and treatment units and complexes.

The Program also prepares consultants and contributing to provide scientific and engineering consultations, through various channels, including the Engineering Consulting Office at the University of Baghdad, and the cooperation mechanism at the College of Engineering, in addition to direct consultative work with all state ministries and for a very large number of construction, service and investment projects in Iraq and its various institutions This includes design, supervision and management work.

## 10. Learning Outcomes, Teaching, Learning and Assessment Methods

### A. Cognitive goals

A1. Establishing a significant knowledge base regarding the mathematics concepts, numerical analysis and computer programming.

A2. Learning the basic analysis and design methods for different types of structures.

A3. Educating the modern adopted construction and management method for different types of projects.

A4. Studying the mechanical properties of different constitutive construction materials.

### B. The skills goals special to the program.

The program planning to build and modified the following skills:

B1. Construction materials test methods.

B2. Survey field applications.

B3. Analysis and design software.

B4. Site management's controls.

### Teaching and Learning Methods

1) Lectures.

2) Tutorials.

3) Homework and Assignments.

4) Lab. Experiments.

5) Tests and Exams.

6) In-Class Questions and Discussions.

7) Connection between Theory and Application.

- 8) Field Trips.
- 9) Extracurricular Activities.
- 10) Seminars.
- 11) In- and Out-Class oral conversations.
- 12) Reports, Presentations, and Posters.

#### Assessment methods

1. Examinations, Tests, and Quizzes.
2. Extracurricular Activities.
3. Student Engagement during Lectures.
4. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

#### C. Affective and value goals

- C1. Increasing student's self-confidence to perform his (homework, classwork and assessment) within the corresponding time.
- C2. Encouraging the teamwork between the students.
- C3. Cooperating the universal activities.
- C4. Supporting the extra-curricular university activities and urging students to participate in them.

#### Teaching and Learning Methods

- 1) Homework and Assignments.
- 2) In-Class Questions and Discussions.
- 3) Field Trips.
- 4) Extracurricular Activities.
- 5) Seminars.
- 6) In- and Out-Class oral conversations.
- 7) Reports, Presentations, and Posters.

#### Assessment methods

1. Extracurricular Activities.
2. Student Engagement during Lectures.
3. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

#### D. General and Transferable Skills (other skills relevant to employability and personal development)

- D1. Increasing the ability to use the design and analysis software.
- D2. Enhancing the skill to perform any significant lab test for different engineering purposes.
- D3. Modifying the engineering drawing aptitude.
- D4. Improving site investigation skill.

#### Teaching and Learning Methods

- 1) Lectures.
- 2) Tutorials.
- 3) Homework and Assignments.
- 4) Lab. Experiments.
- 5) Connection between Theory and Application.
- 6) Field Trips.
- 7) Extracurricular Activities.
- 8) Seminars.
- 9) In- and Out-Class oral conversations.
- 10) Reports, Presentations, and Posters.

#### Assessment Methods

1. Examinations, Tests, and Quizzes.
2. Extracurricular Activities.
3. Student Engagement during Lectures.
4. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

#### 11. Program Structure

#### 12. Awards and Credits

Level/Year	Course or Module Code	Course or Module Title	Credit rating	
First year	GE101	Mathematics	6	Bachelor Degree
First year	CE102	Engineering Mechanics	6	Requires ( 161 ) credits
First year	CE103	Engineering Drawing	6	
First year	CE104	Engineering Geology	4	
First year	CE105	Building Materials	3	
First year	CE108	Engineering Statistics	2	
First year	GE109	Computer Programming	4	
First year	GE107	Workshop	2	
First year	GE111	Technical English	2	
First year	GE113	Arabic Language	2	
Second year	GE201	Mathematics	6	
Second year	CE201	Surveying	6	
Second year	CE203	Mechanics of Materials	6	

Second year	GE204	Computer Programming	4
Second year	CE205	Fluid Mechanics	6
Second year	CE206	Building Constructions	4
Second year	CE207	Concrete Technology	4
Second year	GE211	Technical English	2
Second year	GE206	Freedom & Democracy	2
Third year	CE301	Theory of Structures	6
Third year	CE302	Soil Mechanics	6
Third year	CE303	Reinforced Concrete	6
Third year	CE304	Water Resources	4
Third year	CE305	Engineering Analysis	4
Third year	CE306	Traffic Engineering	4
Third year	CE307	Eng. Management and Economy	4
Third year	CE308	Computer Applications	2
Third year	CE309	Numerical Methods	4
Third year	GE311	Technical English	2
Forth year	CE401	Steel Design	4
Forth year	CE402	Foundation Design	4
Forth year	CE403	Transportation Engineering	6
Forth year	CE404	Sanitary & Environmental Engineering	6
Forth year	CE405	Constructional Methods	2
Forth year	CE407	Quantity Surveying	2
Forth year	CE406	Reinforced Concrete Design	4
Forth year	CE409	Hydrology	4
Forth year	CE410	Selected Topics	4
Forth year	GE411	Technical English	2
Forth year	CE408	Engineering Project	4



### 13. Personal Development Planning

### 14. Admission criteria.

Adopting the admission requirements of the Ministry of Higher Education and Scientific Research.

### 15. Key sources of information about the program

1. Ministry of Higher Education and Scientific Research.
2. Presidency of the University of Baghdad.
3. Deanship of Engineering College.
4. Examination committee in the Department of Civil Engineering.

## Curriculum Skills Map

please tick in the relevant boxes where individual Program Learning Outcomes are met

Year / Level	Course Code	Course Title	Core (C) Title or Option (O)	Program Learning Outcomes											
				Knowledge and understanding				Subject-specific skills				Thinking Skills			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	
First year	GE101	Mathematics	C	<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	CE102	Engineering Mechanics	C		<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	CE103	Engineering Drawing	C										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	CE104	Engineering Geology	C				<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	CE105	Building Materials	C				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	CE108	Engineering Statistics	C	<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	GE109	Computer	C	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

		<b>Programming</b>												
	<b>GE107</b>	<b>Workshop</b>	<b>C</b>									✓	✓	✓
	<b>GE111</b>	<b>Technical English</b>	<b>C</b>									✓	✓	✓
	<b>GE113</b>	<b>Arabic Language</b>	<b>C</b>									✓	✓	✓

<b>Second year</b>	<b>GE201</b>	<b>Mathematics</b>	<b>C</b>	✓								✓	✓	✓
	<b>CE201</b>	<b>Surveying</b>	<b>C</b>			✓		✓				✓	✓	✓
	<b>CE203</b>	<b>Mechanics of Materials</b>	<b>C</b>				✓					✓	✓	✓
	<b>GE204</b>	<b>Computer Programming</b>	<b>C</b>	✓					✓			✓	✓	✓
	<b>CE205</b>	<b>Fluid Mechanics</b>	<b>C</b>		✓							✓	✓	✓
	<b>CE206</b>	<b>Building Constructions</b>	<b>C</b>			✓				✓		✓	✓	✓
	<b>CE207</b>	<b>Concrete Technology</b>	<b>C</b>				✓	✓				✓	✓	✓
	<b>GE211</b>	<b>Technical English</b>	<b>C</b>									✓	✓	✓
	<b>GE206</b>	<b>Freedom &amp; Democracy</b>	<b>C</b>									✓	✓	✓
	<b>CE301</b>	<b>Theory of Structures</b>	<b>C</b>		✓							✓	✓	✓
	<b>CE302</b>	<b>Soil Mechanics</b>	<b>C</b>		✓			✓				✓	✓	✓
	<b>CE303</b>	<b>Reinforced Concrete</b>	<b>C</b>		✓							✓	✓	✓
<b>Third year</b>	<b>CE304</b>	<b>Water Resources</b>	<b>C</b>		✓							✓	✓	✓
<b>year</b>	<b>CE305</b>	<b>Engineering Analysis</b>	<b>C</b>	✓								✓	✓	✓
	<b>CE306</b>	<b>Traffic Engineering</b>	<b>C</b>		✓				✓			✓	✓	✓
	<b>CE307</b>	<b>Eng. Manageme</b>	<b>C</b>			✓				✓		✓	✓	✓

		nt and Economy												
	CE308	Computer	C		✓	✓				✓		✓	✓	✓
		Applications												
	CE309	Numerical Methods	C	✓								✓	✓	✓
	GE311	Technical English	C									✓	✓	✓
Forth year	CE401	Steel Design	C		✓							✓	✓	✓
	CE402	Foundation Design	C		✓							✓	✓	✓
	CE403	Transportation Engineering	C		✓			✓				✓	✓	✓
	CE404	Sanitary & Environmental Engineering	C		✓			✓				✓	✓	✓
	CE405	Constructional Methods	C			✓					✓	✓	✓	✓
	CE407	Quantity Surveying	C			✓					✓	✓	✓	✓
	CE406	Reinforced Concrete Design	C		✓							✓	✓	✓
	CE409	Hydrology	C		✓							✓	✓	✓
	CE410	Selected Topics	C									✓	✓	✓
	GE411	Technical English	C									✓	✓	✓
	CE408	Engineering Project	C		✓	✓	✓					✓	✓	✓

## TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

## COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the program specification.

1. Teaching Institution	College of Engineering University of Baghdad
2. University Department/Centre	Civil Engineering Department (CED)
3. Course title/code	<b>FIRST YEAR Mathematics/GE 101</b>
4. Modes of Attendance offered	Annual System ; There is only one mode of delivery, which is a “Day Program”. The students are full time students, and on campus. They attend full day program in face-to-face mode. The academic year is composed of 30- week regular subjects.
5. Semester/Year	1 <sup>st</sup> and 2 <sup>nd</sup> /Academic Year 2022–2023
6. Number of hours tuition (total)	120 hrs. / 4 hrs. per week
7. Date of production/revision of this specification	01/10/2022
8. Aims of the Course	<ol style="list-style-type: none"><li>1. Introduce basic definition and explain the basic concepts that essential in connection with function and illustrate these concepts by examples.</li><li>2. Explain the purpose of function and their application.</li><li>3. Enable the student to solve the integration (finite and definite).</li></ol>

4. Introduce basic definition and explain the basic concepts of complex number. These series are a very powerful tool in connection with various problems.
5. Enable the student to calculate area and volume generated by revolving the area.

## 9. Learning Outcomes, Teaching, Learning and Assessment Method

### A- Cognitive goals.

- A1. Definition any function.
- A2. Graph any function.
- A3. Derivative and integration any function.
- A4. Integration and application of integration.
- A5. Graph a complex number and determinate the roots.
- A6. Calculate the value of determinate.
- A7. Solved the system of equation using Cramm's rule.
- A8. Determinate the dot and cross product.

### B. The skills goals special to the course.

#### Teaching and Learning Methods

- 1) Lectures.
- 2) Tutorials.
- 3) Homework and Assignments.
- 4) Tests and Exams.
- 5) Class Questions and Discussions.
- 6) Connection between Theory and Application.
- 7) Extracurricular Activities.
- 8) Seminars.
- 9) In- and Out-Class oral conversations.
- 10) Reports, Presentations, and Posters.

#### Assessment methods

1. Examinations, Tests, and Quizzes.
2. Extracurricular Activities.
3. Student Engagement during Lectures.
4. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

### C. Affective and value goals

- C1. Increasing student's self-confidence to perform his (homework, classwork and assessment) within the corresponding time.
- C2. Encouraging the teamwork between the students.
- C3. Cooperating the universal activities.

- C4. Supporting the extra-curricular university activities and urging students to participate in them.

### Teaching and Learning Methods

- 1) Homework and Assignments.
- 2) In-Class Questions and Discussions.
- 3) Field Trips.
- 4) Extracurricular Activities.
- 5) Seminars.
- 6) In- and Out-Class oral conversations.
- 7) Reports, Presentations, and Posters.

### Assessment methods

1. Extracurricular Activities.
2. Student Engagement during Lectures.
3. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

### 10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	4 3the. 1tut.	A1	The interval and equalities	1-10 of article (9)	1 – 4 of article (9)
2	4 3the. 1tut.	A1, A2	Introduction to function	1-10 of article (9)	1 – 4 of article (9)
3	4 3the. 1tut.	A1, A2	Trigonometric and invers functions	1-10 of article (9)	1 – 4 of article (9)
4	4 3the. 1tut.	A1, A2	Domain and range of Trigonometric functions	1-10 of article (9)	1 – 4 of article (9)

5	4 3the. 1tut.	A1, A2	Graph of Trigonometric functions	1-10 of article (9)	1 – 4 of article (9)
6	4 3the. 1tut.	A1, A2, A3	Derivative of Trigonometric and functions	1-10 of article (9)	1 – 4 of article (9)
7	4 3the. 1tut.	A1, A2, A4	Integration of Trigonometric functions	1-10 of article (9)	1 – 4 of article (9)
8	4 3the. 1tut.	A1, A2	Exponential functions	1-10 of article (9)	1 – 4 of article (9)

9	4 3the. 1tut.	A1, A2	Domain and range of Exponential function	1-10 of article (9)	1 – 4 of article (9)
10	4 3the. 1tut.	A1, A2	Graph of Exponential function	1-10 of article (9)	1 – 4 of article (9)
11	4 3the. 1tut.	A1, A2, A3	Derivative of Exponential function	1-10 of article (9)	1 – 4 of article (9)
12	4 3the. 1tut.	A1, A2, A4	Integration of Exponential function	1-10 of article (9)	1 – 4 of article (9)
13	4 3the. 1tut.	A1, A2	Logarithmic functions	1-10 of article (9)	1 – 4 of article (9)
14	4 3the. 1tut.	A1, A2	Domain and range of Logarithmic functions	1-10 of article (9)	1 – 4 of article (9)

15	4 3the. 1tut.	A1, A2	Graph of Logarithmic functions	1-10 of article (9)	1 – 4 of article (9)
16	4 3the. 1tut.	A1, A2, A3	Derivative of Logarithmic functions	1-10 of article (9)	1 – 4 of article (9)
17	4 3the. 1tut.	A1, A2, A4	Integration of Logarithmic functions	1-10 of article (9)	1 – 4 of article (9)

18	4 3the. 1tut.	A1, A2	Hyperbolic Trigonometric and invers functions	1-10 of article (9)	1 – 4 of article (9)
19	4 3the. 1tut.	A1, A2	Domain and range of Hyperbolic functions	1-10 of article (9)	1 – 4 of article (9)
20	4 3the. 1tut.	A1, A2	Graph of Hyperbolic functions	1-10 of article (9)	1 – 4 of article (9)
21	4 3the. 1tut.	A1, A2, A3	Derivative of Hyperbolic functions	1-10 of article (9)	1 – 4 of article (9)
22	4 3the. 1tut.	A1, A2, A4	Integration of Hyperbolic functions	1-10 of article (9)	1 – 4 of article (9)
23	4 3the. 1tut.	A3, A4	Method of integration	1-10 of article (9)	1 – 4 of article (9)
24	4 3the. 1tut.	A3, A4	Method of integration	1-10 of article (9)	1 – 4 of article (9)



25	4 3th. 1tut.	A1, A3	Application of derivative	1-10 of article (9)	1 – 4 of article (9)
26	4 3th. 1tut.	A1, A4	The area	1-10 of article (9)	1 – 4 of article (9)

27	4 3th. 1tut.	A1, A4	The volume	1-10 of article (9)	1 – 4 of article (9)
28	4 3th. 1tut.	A1, A6, A7	Complex number	1-10 of article (9)	1 – 4 of article (9)
29	4 3th. 1tut.	A1, A6, A7	The determinate and matrix	1-10 of article (9)	1 – 4 of article (9)
30	4 3th. 1tut	A1, A6, A7, A8	Liner system of equation	1-10 of article (9)	1 – 4 of article (9)

<b>11. Infrastructure</b>	
1. Books Required reading:	<b>Textbook :</b> Calculus by Thomas
2. Main references (sources)	----
A- Recommended books and references (scientific journals, reports...).	<b>Textbook :</b> Calculus by Thomas
B-Electronic references, Internet sites...	----

## 12. The development of the curriculum plan

1. Teaching Institution	College of Engineering University of Baghdad
2. University Department/Centre	Civil Engineering Department (CED)
3. Course title/code	<b>FIRST YEAR</b> <b>Engineering Mechanics / CE 102</b>
4. Modes of Attendance offered	Annual System; There is only one mode of delivery, which is a “Day Program”. The students are full time students, and on campus. They attend full day program in face-to-face mode. The academic year is composed of 30-week regular subjects.
5. Semester/Year	1 <sup>st</sup> and 2 <sup>nd</sup> /Academic Year 2022–2023
6. Number of hours tuition (total)	120 hrs. / 4 hrs. per week
7. Date of production/revision of this specification	01/10/2022
8. Aims of the Course	<ol style="list-style-type: none"> <li>1. Introduce basic definitions and introductory concepts of engineering mechanics/statics</li> <li>2. Analyze forces and find out the resultant forces in two and three dimension</li> <li>3. Differentiate between various type of supports and draw free-body-diagram, Compute the reaction force in simple structure (beam, frame, truss)</li> <li>4. Obtain center of gravity and centroid for deferent engineering shapes &amp; moment of inertia for deferent sections</li> </ol>

## 9. Learning Outcomes, Teaching, Learning and Assessment Method

A- Cognitive goals.

- A1. Analyze forces and moments in two and three dimensions,
- A2. Find out the resultant forces in two and three dimensions
- A3. Draw free-body-diagram, Compute the reaction force in simple structure (beam, frame, truss)
- A4. Study Mechanism and laws of friction
- A5. Obtain and centroid for deferent engineering shapes.
- A6. Obtain moment of inertia for deferent engineering shapes
- A7. Understand the engineering applications that evolve dynamics. A8. Solve engineering problems involving objects moving along a linear

path.

- A9. Simplify engineering problems involving objects moving along a curved path.
- A10. Recognize and deal with projectile problems.
- A11. Write the equation of motion of a moving object.
- A12. Solve problems involving the force in accelerated bodies.
- A13. Apply the theorem of conservation of energy to solve kinetic problems

B. The skills goals special to the course.

Teaching and Learning Methods

- 1) Lectures.
- 2) Tutorials.
- 3) Homework and Assignments.
- 4) Tests and Exams.
- 5) In-Class Questions and Discussions.
- 6) Connection between Theory and Application.
- 7) Extracurricular Activities.
- 8) Seminars.
- 9) In- and Out-Class oral conservations.
- 10) Reports, Presentations, and Posters.

Assessment methods

1. Examinations, Tests, and Quizzes.
2. Extracurricular Activities.
3. Student Engagement during Lectures.
4. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

### C. Affective and value goals

C1. Increasing student's self-confidence to perform his (homework, classwork and assessment) within the corresponding time.

C2. Encouraging the teamwork between the students.

C3. Cooperating the universal activities.

C4. Supporting the extra-curricular university activities and urging students to participate in them.

### Teaching and Learning Methods

- 1) Homework and Assignments.
- 2) In-Class Questions and Discussions.
- 3) Field Trips.
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- 5) Seminars.
- 6) In- and Out-Class oral conversations.
- 7) Reports, Presentations, and Posters.

### Assessment methods

1. Extracurricular Activities.
2. Student Engagement during Lectures.
3. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

### D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

## 10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	4  <i>Statics</i>  3the.	A1	Introduction to engineering mechanics: statics	1-10 of article (9)	1 – 4 of article (9)

	<i>Dyn.</i> 1the. 1tut.	A7	Introduction to engineering mechanics: Dynamics		
2	4 <i>Statics</i> 2the. 1tut.	A1	Resolution of forces into components(two dimensions)	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1tut.	A7	General Principles in Engineering Mechanics/ Dynamics		
3	4 <i>Statics</i> 3the.	A1	Resolution of forces into components(two dimensions)	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1the.	A7	Kinematics of a Particle; Introduction		
4	4 <i>Statics</i> 2the. 1tut.	A1	Principle of Moments and Couples	1-10 of article (9)	1 – 4 of article (9)

	<i>Dyn.</i> 1tut.	A8	Kinematics of a Particle; Introduction		
5	4 <i>Statics</i> 3the.	A1	Resolution of forces into components(three dimensions)	1-10 of article (9)	1 – 4 of article (9)

	<i>Dyn.</i> 1the. 1tut.	A8	Rectilinear Kinematics: Continuous Motion		
6	4 <i>Statics</i> 2the. 1tut.	A1	Principle of Moments and Couples (three dimensions)	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1tut.	A8	Rectilinear Kinematics: Continuous Motion		
7	4 <i>Statics</i> 3the.	A2	Result of coplanar forces system(concurrent, parallel and non- concurrent and non parallel)	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1the.	A8	Rectilinear Kinematics: Continuous Motion		
8	4 <i>Statics</i> 2the. 1tut	A2	Result of coplanar forces system(concurrent, parallel and non- concurrent and non parallel)	1-10 of article (9)	1 – 4 of article (9)

	<i>Dyn.</i> 1tut.	A8	Rectilinear Kinematics: Erratic Motion		
9	4 <i>Statics</i> 3the.	A2	Result of coplanar forces system(concurrent, parallel and non- concurrent and non parallel)	1-10 of article (9)	1 – 4 of article (9)

	<i>Dyn.</i> 1the.	A8	Rectilinear Kinematics: Erratic Motion		
10	4 <i>Statics</i> 2the. 1tut	A2	Result of Non coplanar forces system (concurrent, parallel and non- concurrent and non parallel)	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1tut.	A8	Rectilinear Kinematics: Erratic Motion		
11	4 <i>Statics</i> 3the.	A2	Result of Non coplanar forces system (concurrent, parallel and non- concurrent and non parallel)	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1the.	A8	Rectilinear Kinematics: Erratic Motion		

12	4 <i>Statics</i> 2the. 1tut	A3	Equilibrium and Free Body Diagram	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1tut.	A9	Curvilinear Motion: Rectangular Components		
13	4 <i>Statics</i> 3the.	A3	Analysis of Frames in the Plane	1-10 of article (9)	1 – 4 of article (9)

	<i>Dyn.</i> 1the.	A9	Curvilinear Motion: Rectangular Components		
14	4 <i>Statics</i> 2the. 1tut	A3	Analysis of Frames in the Plane	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1tut.	A10	Curvilinear Motion: Motion of a Projectile		
15	4 <i>Statics</i> 3the.	A3	Analysis of Frames in the Plane	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1the.	A10	Curvilinear Motion: Motion of a Projectile		
16	4 <i>Statics</i>	A3	Analysis of Trusses in the Plane	1-10 of article (9)	1 – 4 of article (9)

	2the. 1tut				
	<i>Dyn.</i> 1tut.	A10	Curvilinear Motion: Motion of a Projectile		
17	4 <i>Statics</i> 3the.	A3	Analysis of Trusses in the Plane	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1the.	A10	Curvilinear Motion: Motion of a		



			Projectile		
18	4 <i>Statics</i> 2the. 1tut	A3	Analysis of Frames and Truss in the Space	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1tut.	A11	Kinetics of a Particle Newton's Second Law		
19	4 <i>Statics</i> 3the.	A4	Friction	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1the.	A11	Kinetics of a Particle The Equation of Motion		
20	4 <i>Statics</i> 2the. 1tut	A4	Friction	1-10 of article (9)	1 – 4 of article (9)

	<i>Dyn.</i> 1tut.	A11	Kinetics of a Particle The Equation of Motion		
21	4 <i>Statics</i> 3the.	A4	Friction	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1the.	A12	Equations of Motion: Rectangular Coordinates		

22	4 <i>Statics</i> 2the. 1tut	A5	Centroids by integration	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1tut.	A12	Equations of Motion: Rectangular Coordinates		
23	4 <i>Statics</i> 3the.	A5	Centroids by integration	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1the.	A12	Equations of Motion: Force and Acceleration		
24	4 <i>Statics</i> 2the. 1tut	A5	Centroids of composite areas bodies	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i>	A12	Equations of Motion: Force and		

	1tut.		Acceleration		
25	4 <i>Statics</i> 3the.	A6	Centroids of composite areas bodies	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1the.	A12	Equations of Motion: Force and Acceleration		

26	4 <i>Statics</i> 2the. 1tut	A6	Moment of Inertia by integration	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1tut.	A12	Equations of Motion: Force and Acceleration		
27	4 <i>Statics</i> 3the.	A6	Moment of Inertia by integration	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1the.	A13	Kinetics of a Particle: the work of a force		
28	4 <i>Statics</i> 2the. 1tut	A6	Moment of Inertia of composite areas bodies	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1tut.	A13	Kinetics of a Particle: Principles of work and energy		

29	4 <i>Statics</i> 3the.	A6	Moment of Inertia of composite areas bodies	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1the.	A13	Conservation of Energy		

30	4 <i>Statics</i> 2the. 1tut	A6	Polar Moment of Inertia, and Products of Inertia, Mohr circle	1-10 of article (9)	1 – 4 of article (9)
	<i>Dyn.</i> 1tut.	A13	Conservation of Energy		

11. Infrastructure	
1. Books Required reading:	<ol style="list-style-type: none"> <li>1. Engineering Mechanics: Statics &amp; Dynamics 13<sup>th</sup> edition. By R. C. Hibbeler, 2015</li> <li>2. Engineering Mechanics: Statics 6<sup>th</sup> edition by J.L. Meriam &amp; L.G. Kraige, 2007</li> <li>3. Engineering Mechanics: Statics &amp; Dynamics 3rd edition. By Archie Highdon &amp; William B. Stiles, 1968</li> </ol>
2. Main references (sources)	-----
A- Recommended books and references (scientific journals, reports...).	-----
B-Electronic references, Internet sites...	

## 12. The development of the curriculum plan

1. Teaching Institution	College of Engineering University of Baghdad
2. University Department/Centre	Civil Engineering Department

	(CED)
3. Course title/code	<b>FIRST YEAR</b> <b>Engineering Drawing / CE 103</b>
4. Modes of Attendance offered	Annual System; There is only one mode of delivery, which is a “Day Program”. The students are full time students, and on campus. They attend full day program in face-to-face mode. The academic year is composed of 30-week regular subjects.
5. Semester/Year	1 <sup>st</sup> and 2 <sup>nd</sup> /Academic Year 2022–2023
6. Number of hours tuition (total)	150 hrs. / 5 hrs. per week
7. Date of production/revision of this specification	01/10/2022
8. Aims of the Course	
This unit will enable learners to produce engineering drawings of different components, assemblies and circuits using a variety of sketching, drawing and computer-aided drafting techniques.	

### 9. Learning Outcomes, Teaching, Learning and Assessment Method

<p>A- Cognitive goals.</p> <p>A1. Sketch engineering components.</p> <p>A2. Interpret engineering drawings that comply with drawing standards.</p> <p>A3. Produce engineering drawings.</p>
<p>B. The skills goals special to the course.</p>
<p>Teaching and Learning Methods</p>
<p>1) Lectures.</p> <p>2) Tutorials.</p> <p>3) Homework and Assignments.</p> <p>4) Lab. Experiments.</p> <p>5) Tests and Exams.</p> <p>6) In-Class Questions and Discussions.</p>

- 7) Connection between Theory and Application.
- 8) Field Trips.
- 9) Extracurricular Activities.
- 10) Seminars.
- 11) In- and Out-Class oral conservations.
- 12) Reports, Presentations, and Posters.

#### Assessment methods

1. Examinations, Tests, and Quizzes.
2. Extracurricular Activities.
3. Student Engagement during Lectures.
4. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

#### C. Affective and value goals

- C1. Increasing student's self-confidence to perform his (homework, classwork and assessment) within the corresponding time.
- C2. Encouraging the teamwork between the students.
- C3. Cooperating the universal activities.
- C4. Supporting the extra-curricular university activities and urging students to participate in them.

#### Teaching and Learning Methods

- 1) Homework and Assignments.
- 2) In-Class Questions and Discussions.
- 3) Field Trips.
- 4) Extracurricular Activities.
- 5) Seminars.
- 6) In- and Out-Class oral conservations.
- 7) Reports, Presentations, and Posters.

#### Assessment methods

1. Extracurricular Activities.
2. Student Engagement during Lectures.
3. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

#### D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

- D1. Modifying the engineering drawing aptitude.

## 10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	5 1the. 4exp.	A1	Introduction	1-12 of article (9)	1 – 4 of article (9)
2	5 1the. 4exp	A1	Geometric Typing	1-12 of article (9)	1 – 4 of article (9)
3	5 1the. 4exp	A1	Lines	1-12 of article (9)	1 – 4 of article (9)
4	5 1the. 4exp	A1	Lines	1-12 of article (9)	1 – 4 of article (9)
5	5 1the. 4exp	A1	Geometric Processing	1-12 of article (9)	1 – 4 of article (9)
6	5 1the. 4exp	A2, A3	Geometric Processing	1-12 of article (9)	1 – 4 of article (9)
7	5 1the. 4exp	A2, A3	Geometric Processing	1-12 of article (9)	1 – 4 of article (9)
8	5 1the. 4exp	A2, A3	Theory of Projection	1-12 of article (9)	1 – 4 of article (9)

9	5 1the. 4exp	A2, A3	Theory of Projection	1-12 of article (9)	1 – 4 of article (9)
10	5 1the. 4exp	A2, A3	Theory of Projection	1-12 of article (9)	1 – 4 of article (9)
11	5 1the. 4exp	A2, A3	Theory of Projection	1-12 of article (9)	1 – 4 of article (9)
12	5 1the. 4exp	A2, A3	Theory of Projection	1-12 of article (9)	1 – 4 of article (9)
13	5 1the. 4exp	A2, A3	Theory of Projection	1-12 of article (9)	1 – 4 of article (9)
14	5 1the. 4exp	A2, A3	Theory of Projection	1-12 of article (9)	1 – 4 of article (9)
15	5 1the. 4exp	A2, A3	Theory of Projection	1-12 of article (9)	1 – 4 of article (9)
16	5 1the. 4exp	A2, A3	Dimensions	1-12 of article (9)	1 – 4 of article (9)
17	5 1the. 4exp	A2, A3	Dimensions	1-12 of article (9)	1 – 4 of article (9)

18	5 1the. 4exp	A2, A3	Sections	1-12 of article (9)	1 – 4 of article (9)
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19	5 1the. 4exp	A2, A3	Sections	1-12 of article (9)	1 – 4 of article (9)
20	5 1the. 4exp	A2, A3	Sections	1-12 of article (9)	1 – 4 of article (9)
21	5 1the. 4exp	A2, A3	Sections	1-12 of article (9)	1 – 4 of article (9)
22	5 1the. 4exp	A2, A3	Pictorial Drawing	1-12 of article (9)	1 – 4 of article (9)
23	5 1the. 4exp	A2, A3	Pictorial Drawing	1-12 of article (9)	1 – 4 of article (9)
24	5 1the. 4exp	A2, A3	Pictorial Drawing	1-12 of article (9)	1 – 4 of article (9)
25	5 1the. 4exp	A2, A3	Pictorial Drawing	1-12 of article (9)	1 – 4 of article (9)
26	5 1the. 4exp	A2, A3	Pictorial Drawing	1-12 of article (9)	1 – 4 of article (9)

27	5 1the. 4exp	A2, A3	Structural Drawing	1-12 of article (9)	1 – 4 of article (9)
28	5 1the. 4exp	A2, A3	Structural Drawing	1-12 of article (9)	1 – 4 of article (9)

29	5 1the. 4exp	A2, A3	Structural Drawing	1-12 of article (9)	1 – 4 of article (9)
30	5 1the. 4exp	A2, A3	Structural Drawing	1-12 of article (9)	1 – 4 of article (9)

<b>11. Infrastructure</b>	
1. Books Required reading:	- “Principle of technical drawing” by Frederick E. Giesecke, Alva Mitchell, Henry Cecil Spencer, Ivan Hill, John Thomas, James E. Novak, 1992. - “Graphics Drawing workbook” by Gray R. Bertoline, 2000
2. Main references (sources)	- Engineering drawing by Abed Alrasul Al Khafaf, 1986.
A- Recommended books and references (scientific journals, reports...).	----
B-Electronic references, Internet sites...	----

## 12. The development of the curriculum plan

1. Teaching Institution	College of Engineering University of Baghdad
2. University Department/Centre	Civil Engineering Department (CED)
3. Course title/code	<b>FIRST YEAR</b> <b>Engineering Geology / CE 104</b>

4. Modes of Attendance offered	Annual System ; There is only one mode of delivery, which is a “Day Program”. The students are full time students, and on campus. They attend full day program in face-to-face mode. The academic year is composed of 30- week regular subjects.
5. Semester/Year	1 <sup>st</sup> and 2 <sup>nd</sup> /Academic Year 2022–2023
6. Number of hours tuition (total)	90 hrs. / 3 hours per week
7. Date of production/revision of this specification	01/10/2022
8. Aims of the Course	
<ol style="list-style-type: none"> <li>1.Introduce basic definitions and introductory concepts general geology and engineering geology</li> <li>2.Explain application of geology in civil engineering as well as the different types of geology</li> <li>3.Define each type of the given minerals as well as their properties</li> <li>4.Explanation of the factors that affecting the earth crust</li> <li>5.Identify the different types of rocks with the structural geology of different rocks</li> <li>6.study the physical and mechanical properties of rocks</li> <li>7.Identify the different factors that affecting the rock properties</li> <li>8.Calculating the normal stress and strain of rocks and soil samples</li> <li>9.Identify soils and explain its physical and mechanical properties (Shear strength)</li> <li>10.To classify the different soil types according to USCS</li> <li>11.Identify all factors that affecting the earth crust and its components (internal and external forces)</li> <li>12. Calculating the effective stresses, internal stresses and external stresses from footings.</li> <li>13.To understand the concept of earthquakes.</li> <li>14. To study the different types of waves.</li> <li>15. To classify earthquake according to Mercalli or Richter scales</li> <li>16.To understand the concept of geophysical investigations.</li> </ol>	

17.To understand the concept of geological map.

## 9. Learning Outcomes, Teaching, Learning and Assessment Method

## A- Cognitive goals.

A1. At the end of the class, the student will be able to:

A2. The student would make a separation between general geology and engineering geology

A3. The student will know the application of geology in civil engineering as well as the different types of geology

A4. The student would be able to define each type of the given minerals as well as their properties

A5. The student would be able to calculate the normal stress and strain of rocks and soil samples

A6. The student would be able to identify soils and explain its physical and mechanical properties (Shear strength)

A7. To classify the different soil types according to USCS

A8. Identify all factors that affecting the earth crust and its components (internal and external forces)

A9. Calculating the effective stresses, internal stresses and external stresses from footings.

A10. To understand the concept of ground water

A11. To understand the concept of geophysical investigations

A12. To understand the concept of geological map

## B. The skills goals special to the course.

### Teaching and Learning Methods

1. Lectures.
2. Tutorials.
3. Homework and Assignments.
4. Lab. Experiments.
5. Tests and Exams.
6. In-Class Questions and Discussions.
7. Connection between Theory and Application.
8. Field Trips.
9. Extracurricular Activities.
10. Seminars.
11. In- and Out-Class oral conversations.
12. Reports, Presentations, and Posters.

### Assessment methods

1. Examinations, Tests, and Quizzes.
2. Extracurricular Activities.
3. Student Engagement during Lectures.
4. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

C. Affective and value goals

C1. Increasing student's self-confidence to perform his (homework, classwork and assessment) within the corresponding time.

C2. Encouraging the teamwork between the students.

C3. Cooperating the universal activities.

C4. Supporting the extra-curricular university activities and urging students to participate in them.

Teaching and Learning Methods

- 1) Homework and Assignments.
- 2) In-Class Questions and Discussions.
- 3) Field Trips.
- 4) Extracurricular Activities.
- 5) Seminars.
- 6) In- and Out-Class oral conversations.
- 7) Reports, Presentations, and Posters.

Assessment methods

1. Extracurricular Activities.
2. Student Engagement during Lectures.
3. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

D1. Improving site investigation skills that help the students to distinguish the differences among soils and rocks types and properties.

10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	3 2 the. 1tut	A2, A3	Introduction to geology	1-12 of article (9)	1 – 4 of article (9)

2	3 2 the. 1tut	A2, A3	Types of geology	1-12 of article (9)	1 – 4 of article (9)
3	3 2 the. 1tut	A2, A3	Engineering geology (definition and applications)	1-12 of article (9)	1 – 4 of article (9)
4	3 2 the. 1tut	A2, A3	Crystallography	1-12 of article (9)	1 – 4 of article (9)
5	3 2 the. 1tut	A2, A3	Crystallography + types	1-12 of article (9)	1 – 4 of article (9)
6	3 2 the. 1tut	A2, A3	Minerals (definition and occurrence)	1-12 of article (9)	1 – 4 of article (9)
7	3 2 the. 1tut	A2, A3	Types of minerals	1-12 of article (9)	1 – 4 of article (9)
8	3 2 the. 1tut	A2, A3	Types of minerals	1-12 of article (9)	1 – 4 of article (9)

9	3 2 the. 1tut	A2, A3	Rocks (definition+ rock cycle)	1-12 of article (9)	1 – 4 of article (9)
10	3 2 the. 1tut	A2, A3	Igneous rocks (Definition and types)	1-12 of article (9)	1 – 4 of article (9)
11	3 2 the. 1tut	A2, A3	Igneous rocks(types)	1-12 of article (9)	1 – 4 of article (9)

12	3 2 the. 1tut	A2, A3	Sedimentary rocks (Definition and types)	1-12 of article (9)	1 – 4 of article (9)
13	3 2 the. 1tut	A2, A3	Sedimentary rocks (types)	1-12 of article (9)	1 – 4 of article (9)
14	3 2 the. 1tut	A2, A3	Metamorphic rocks (Definition and types)	1-12 of article (9)	1 – 4 of article (9)
15	3 2 the. 1tut	A2, A3	Metamorphic rocks (types)	1-12 of article (9)	1 – 4 of article (9)
16	3 2 the. 1tut	A2, A3	Structural Geology (Faults)	1-12 of article (9)	1 – 4 of article (9)
17	3 2 the. 1tut	A2, A3	Structural Geology (folds)	1-12 of article (9)	1 – 4 of article (9)

18	3 2 the. 1tut	A2, A3	Weathering of rocks	1-12 of article (9)	1 – 4 of article (9)
19	3 2 the. 1tut	A1, A2, A3	Erosion of rocks	1-12 of article (9)	1 – 4 of article (9)
20	3 2 the. 1tut	A1, A2, A3	Works of rivers and water	1-12 of article (9)	1 – 4 of article (9)
21	3 2 the. 1tut	A1, A2, A3	Works of air and glaciers	1-12 of article (9)	1 – 4 of article (9)

22	3 2 the. 1 tut	A1, A2, A3	Work of sea and groundwater	1-12 of article (9)	1 – 4 of article (9)
23	3 2 the. 1 tut	A1, A2, A3	Work of organics + river	1-12 of article (9)	1 – 4 of article (9)
24	3 2 the. 1 tut	A1, A2, A3	Physical properties of rocks (applications)	1-12 of article (9)	1 – 4 of article (9)
25	3 2 the. 1 tut	A1, A2, A3	Physical properties of rocks (applications)	1-12 of article (9)	1 – 4 of article (9)
26	3 2 the. 1 tut	A1, A2, A3	Mechanical properties of rocks (applications)	1-12 of article (9)	1 – 4 of article (9)

27	3 2 the. 1 tut	A1, A2, A3	Soil (formation and types)	1-12 of article (9)	1 – 4 of article (9)
28	3 2 the. 1 tut	A1, A2, A3	Stresses within soil media and external stresses (point load)	1-12 of article (9)	1 – 4 of article (9)
29	3 2 the. 1 tut	A1, A2, A3	Geotechnical and geological maps	1-12 of article (9)	1 – 4 of article (9)
30	3 2 the. 1 tut	A1, A2, A3	Geotechnical and geological maps	1-12 of article (9)	1 – 4 of article (9)



1. Books Required reading:	<ul style="list-style-type: none"> <li>• K. M. BANGAR (1995) : "A textbook of Geology: General and Engineering". Standard Publisher Distributors, Lumos Offset Press, Delhi, India.</li> <li>• MUNI BUDHU (2011): " Soil Mechanics and Foundations". 3rd edition, John Wily &amp; Sons, Inc., USA.</li> </ul>
2. Main references (sources)	----
A- Recommended books and references (scientific journals, reports...).	----
B-Electronic references, Internet sites...	----

## 12. The development of the curriculum plan

1. Teaching Institution	College of Engineering University of Baghdad
2. University Department/Centre	Civil Engineering Department (CED)
3. Course title/code	<b>FIRST YEAR</b> <b>Building Materials / CE 105</b>
4. Modes of Attendance offered	Annual System ; There is only one mode of delivery, which is a "Day Program". The students are full time students, and on campus. They attend full day program in face-to-face mode. The academic year is composed of 30- week regular subjects.
5. Semester/Year	1 <sup>st</sup> and 2 <sup>nd</sup> /Academic Year 2022–2023
6. Number of hours tuition (total)	90 hrs. / 3 hrs. per week
7. Date of production/revision of this specification	01/10/2022

## 8. Aims of the Course

1. Introduce basic definition and explain the basic concepts that essential in connection with materials and illustrate these concepts by examples and tests.
2. Explain the uses of the materials and their applications.
3. Enable the student to analyze the material (chemically and physically).
4. Introduce basic definition and explain the basic concepts of materials available in the local market.
5. Enable the student to perform tests on the studied materials

## 9. Learning Outcomes, Teaching, Learning and Assessment Method

### A- Cognitive goals.

- A1. Define any building materials.
- A2. Graph basic relationships considering materials properties.
- A3. Know the raw and ingredients of the materials.
- A4. Tests materials for basic and most important experiments.
- A5. Know the standards related to the specifications of the materials.
- A6. Calculate the mathematic relations for some materials.
- A7. Specify the quality of good material theoretically and practically.

### B. The skills goals special to the course.

- B1. Construction materials test methods.

## Teaching and Learning Methods

- 1) Lectures.
- 2) Tutorials.
- 3) Homework and Assignments.
- 4) Lab. Experiments.
- 5) Tests and Exams.
- 6) In-Class Questions and Discussions.
- 7) Connection between Theory and Application.
- 8) Field Trips.
- 9) Extracurricular Activities.
- 10) Seminars.
- 11) In- and Out-Class oral conservations.
- 12) Reports, Presentations, and Posters.

## Assessment methods

1. Examinations, Tests, and Quizzes.
2. Extracurricular Activities.
3. Student Engagement during Lectures.
4. Responses Obtained from Students.
5. preparing reports about the lab tests

C. Affective and value goals

- C1. Increasing student's self-confidence to perform his (homework, classwork and assessment) within the corresponding time.
- C2. Encouraging the teamwork between the students.
- C3. Cooperating the universal activities.
- C4. Supporting the extra-curricular university activities and urging students to participate in them.

Teaching and Learning Methods

- 1) Homework and Assignments.
- 2) In-Class Questions and Discussions.
- 3) Field Trips.
- 4) Extracurricular Activities.
- 5) Seminars.
- 6) In- and Out-Class oral conversations.

7) Reports, Presentations, and Posters.

Assessment methods

1. Extracurricular Activities.
2. Student Engagement during Lectures.
3. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

- C. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

- D1. Enhancing the skills to perform any significant lab test for different engineering purposes.

Week	hours	ILOs	Unit/Module or Topic Title	Teaching method	Assessment method
1	3 1the. 1tut. 1exp.	A1- A7	Introduction of Construction Materials Science  1. Types of building 2. Mechanical properties of materials 3. Materials properties	1-12 of article (9)	1-5 of article (9)
2	3 1the. 1tut. 1exp.	A1- A7	Bonding Material Gypsum plaster  1. Introduction of Gypsum plaster  2.Manufacture of gypsum plaster  3.Gypsm products : a. Plaster of Paris  b.Ordina ry plaster  c.Techni cal plaster  d.Anhyd rous plaster	1-12 of article (9)	1-5 of article (9)

			e. Keen cement		
3	3 1the. 1tut. 1exp.	A1- A7	<p>Bonding Material Lime</p> <p>1. Definition and classification</p> <p>a. Quick lime</p> <p>b. Hydrated lime</p> <p>2. Manufacture of lime - Theory of calcinations</p> <p>3. Properties of quick lime</p> <p>4. Properties of hydrated lime</p>	1-12 of article (9)	1-5 of article (9)
4	3 1the. 1tut. 1exp.	A1- A7	<p>Bricks</p> <p><i>Classification of bricks according to constituent raw material:</i></p> <p><i>1. Clay bricks</i></p> <p><i>1.1 Raw materials</i></p> <p><i>1.2 Composition of good clay brick</i></p> <p><i>1-3 Harmful ingredients in clay bricks</i></p> <p><i>1.4 Manufacture of bricks:</i></p> <p><i>1.5 Classification of clay bricks in</i></p>	1-12 of article (9)	1-5 of article (9)

			<i>accordance with Iraqi standard No. 25/1988</i>		
5	3 1the. 1tut. 1exp.	A1-A7	<i>Bricks</i> <i>1.6 Properties of bricks:</i> <i>1.6.1 Compressive strength</i> <i>1.6.2 Water absorption</i> <i>1.6.3 Effloresce</i>	1-12 of article (9)	1-5 of article (9)
6	3 1the. 1tut. 1exp.	A1-A7	<i>2. Sand - Lime bricks:</i> <i>.2 Mix proportion: 2.3</i> <i>Manufacture:</i> <i>2.4 Properties of lime sand brick</i> <i>3. Concrete bricks</i> <i>3.2 Properties of concrete bricks</i>	1-12 of article (9)	1-5 of article (9)
7	3 1the. 1tut. 1exp.	b A1-A7	<i>Blocks</i> <i>1.Introduction</i>	1-12 of article (9)	1-5 of article (9)
8	3 1the. 1tut. 1exp.	A1-A7	<i>2.Types of blocks</i>	1-12 of article (9)	1-5 of article (9)

9	3 1the. 1tut. 1exp.	A1- A7	3.Manufactures of blocks	1-12 of article (9)	1-5 of article (9)
10	3 1the. 1tut. 1exp.	A1- A7	4.Uses of blocks	1-12 of article (9)	1-5 of article (9)
11	3 1the. 1tut. 1exp.	A1- A7	-solid blocks -hollow blocks	1-12 of article (9)	1-5 of article (9)
12	3 1the. 1tut. 1exp.	A1- A7	-itonic blocks -thermal blocks	1-12 of article (9)	1-5 of article (9)
13	3 1the. 1tut. 1exp.	A1- A7	-glass blocks -hourdy blocks	1-12 of article (9)	1-5 of article (9)
14	3 1the. 1tut. 1exp.	A1- A7	Tiles – Introduction Classification	1-12 of article (9)	1-5 of article (9)
15	3 1the. 1tut.	A1- A7	Types & uses of tiles	1-12 of article (9)	1-5 of article (9)

	1exp.				
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16	3 1the. 1tut. 1exp.	A1- A7	Manufacture of Tiles	1-12 of article (9)	1-5 of article (9)
17	3 1the. 1tut. 1exp.	A1- A7	Timber Classification of trees	1-12 of article (9)	1-5 of article (9)
18	3 1the. 1tut. 1exp.	A1- A7	Seasoning in wood	1-12 of article (9)	1-5 of article (9)
19	3 1the. 1tut. 1exp.	A1- A7	Methods of wood seasoning	1-12 of article (9)	1-5 of article (9)
20	3 1the. 1tut. 1exp.	A1- A7	Natural defects in timber	1-12 of article (9)	1-5 of article (9)
21	3 1the. 1tut. 1exp.	A1- A7	Artificial defects in timber	1-12 of article (9)	1-5 of article (9)
22	3 1the.	A1- A7	Mechanical properties of woods	1-12 of article (9)	1-5 of article (9)

	1tut. 1exp.				
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23	3 1the. 1tut. 1exp.	A1- A7	Strength and moisture in wood	1-12 of article (9)	1-5 of article (9)
24	3 1the. 1tut. 1exp.	A1- A7	Timber defects -Shrinkage in timber - Warping in timber - Cheking in timber	1-12 of article (9)	1-5 of article (9)
25	3 1the. 1tut. 1exp.	A1- A7	Metal Properties of metals	1-12 of article (9)	1-5 of article (9)
26	3 1the. 1tut. 1exp.	A1- A7	-Classification of steel due to carbon content	1-12 of article (9)	1-5 of article (9)
27	3 1the. 1tut. 1exp.	A1- A7	-high carbon steel -properties &uses	1-12 of article (9)	1-5 of article (9)
28	3 1the. 1tut.	A1- A7	-low carbon steel -properties &uses	1-12 of article (9)	1-5 of article (9)

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29	3 1the. 1tut. 1exp.	A1- A7	-factors affecting steel properties	1-12 of article (9)	1-5 of article (9)
30	3 1the. 1tut. 1exp.	A1- A7	-heat treatment of steel	1-12 of article (9)	1-5 of article (9)

<b>11. Infrastructure</b>	
<b>1. Books Required reading:</b>	<ul style="list-style-type: none"> <li>- Construction materials by zuhair Sakoo</li> <li>- Concrete Technology by Chand</li> <li>- Construction materials by Sersem</li> <li>-Developed reinforced concrete by R.N. Swamy</li> <li>ACI (American concrete institute),ASTM(American standards for testing methods), BS (British standards</li> </ul>
<b>2. Main references (sources)</b>	----
<b>A- Recommended books and references (scientific journals, reports...).</b>	----
<b>B-Electronic references, Internet sites...</b>	----

## 12. The development of the curriculum plan

<b>1. Teaching Institution</b>	<b>College of Engineering University of Baghdad</b>
<b>2. University Department/Centre</b>	<b>Civil Engineering Department (CED)</b>
<b>3. Course title/code</b>	<b>FIRST YEAR Engineering Statistics /CE 108</b>

4. Modes of Attendance offered	Annual System; There is only one mode of delivery, which is a “Day Program”. The students are full time students, and on campus. They attend full day program in face-to-face mode. The academic year is composed of 30-week regular subjects.
5. Semester/Year	1st and 2nd/Academic Year 2022–2023
6. Number of hours tuition (total)	60 hrs. / 2 hrs. per week
7. Date of production/revision of this specification	01/10/2022
8. Aims of the Course	
<ol style="list-style-type: none"> <li>1) Solve some practical problems by statistical methods.</li> <li>2) Develop their skills in thinking.</li> <li>3) Analyzing problems from a probabilistic.</li> <li>4) Statistical point of view.</li> <li>5) Provide the engineer with both descriptive and analytical methods for dealing with the variability in observed data.</li> <li>6) How engineers use statistical methodology as part of the engineering problem-solving process.</li> </ol>	

9. Learning Outcomes, Teaching, Learning and Assessment Method
<p>A- Cognitive goals.</p> <ol style="list-style-type: none"> <li>A1. Determine measure of central tendency and variation from a data set, and estimate Population parameters.</li> <li>A2. Identify the distribution of a random variable (discrete or continuous) of interest in an experiment, and calculate the probability that the random variable can take on certain values.</li> <li>A3. Conduct hypothesis testing and construct confidence intervals for the population mean, variance, or proportion (one sample and two samples).</li> <li>A4. Apply the principles of linear regression to predict the outcomes of certain experiment parameters.</li> </ol>

B. The skills goals special to the course.
Teaching and Learning Methods

- 1) Lectures.
- 2) Tutorials.
- 3) Homework and Assignments.
- 4) Tests and Exams.
- 5) In-Class Questions and Discussions.
- 6) Connection between Theory and Application.
- 7) Extracurricular Activities.
- 8) Seminars.
- 9) In- and Out-Class oral conversations.
- 10) Reports, Presentations, and Posters.

#### Assessment methods

1. Examinations, Tests, and Quizzes.
2. Extracurricular Activities.
3. Student Engagement during Lectures.
4. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

#### C. Affective and value goals

- C1. Increasing student's self-confidence to perform his (homework, classwork and assessment) within the corresponding time.
- C2. Encouraging the teamwork between the students.
- C3. Cooperating the universal activities.
- C4. Supporting the extra-curricular university activities and urging students to participate in them.

#### Teaching and Learning Methods

- 1) Homework and Assignments.
- 2) In-Class Questions and Discussions.
- 3) Field Trips.
- 4) Extracurricular Activities.
- 5) Seminars.
- 6) In- and Out-Class oral conversations.
- 7) Reports, Presentations, and Posters.

#### Assessment methods

1. Extracurricular Activities.
2. Student Engagement during Lectures.
3. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

10. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2 1the. 1tut.	A1	The Nature of Probability and Statistics	1-10 of article (9)	1 – 4 of article (9)
2	2 1the. 1tut	A1	The Nature of Probability and Statistics	1-10 of article (9)	1 – 4 of article (9)
3	2 1the. 1tut	A1	Frequency Distribution and Graphs	1-10 of article (9)	1 – 4 of article (9)
4	2 1the. 1tut	A1	Frequency Distribution and Graphs	1-10 of article (9)	1 – 4 of article (9)
5	2 1the. 1tut	A1	Frequency Distribution and Graphs	1-10 of article (9)	1 – 4 of article (9)
6	2 1the. 1tut	A1	Data Description	1-10 of article (9)	1 – 4 of article (9)
7	2 1the. 1tut	A1	Data Description	1-10 of article (9)	1 – 4 of article (9)
8	2 1the. 1tut	A1	Probability and Counting Rules	1-10 of article (9)	1 – 4 of article (9)

9	2 1the. 1tut	A1	Probability and Counting Rules	1-10 of article (9)	1 – 4 of article (9)
10	2 1the. 1tut	A1	Discrete Probability Distribution	1-10 of article (9)	1 – 4 of article (9)
11	2 1the. 1tut	A1	Discrete Probability Distribution	1-10 of article (9)	1 – 4 of article (9)
12	2 1the. 1tut	A1	Discrete Probability Distribution	1-10 of article (9)	1 – 4 of article (9)
13	2 1the. 1tut	A1	The Normal Distribution	1-10 of article (9)	1 – 4 of article (9)
14	2 (1the. 1tut)	A1	The Normal Distribution	1-10 of article (9)	1 – 4 of article (9)
15	2 1the. 1tut	A1	The Normal Distribution	1-10 of article (9)	1 – 4 of article (9)
16	2 1the. 1tut	A1	Confidence Intervals and Sample Size	1-10 of article (9)	1 – 4 of article (9)
17	2 1the. 1tut	A1	Confidence Intervals and Sample Size	1-10 of article (9)	1 – 4 of article (9)
18	2	A1	Confidence Intervals and Sample Size	1-10 of article (9)	1 – 4 of article (9)

	1the. 1tut				
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19	2 1the. 1tut	A1	Hypothesis Testing	1-10 of article (9)	1 – 4 of article (9)
20	2 1the. 1tut	A1	Hypothesis Testing	1-10 of article (9)	1 – 4 of article (9)
21	2 1the. 1tut	A1	Testing the Difference between Two Means, Two Proportions, and Two Variances	1-10 of article (9)	1 – 4 of article (9)
22	2 1the. 1tut	A1	Testing the Difference between Two Means, Two Proportions, and Two Variances	1-10 of article (9)	1 – 4 of article (9)
23	2 1the. 1tut	A1	Testing the Difference between Two Means, Two Proportions, and Two Variances	1-10 of article (9)	1 – 4 of article (9)
24	2 1the. 1tut	A1	Testing the Difference between Two Means, Two Proportions, and Two Variances	1-10 of article (9)	1 – 4 of article (9)
25	2 1the. 1tut	A1	Correlation and Regression	1-10 of article (9)	1 – 4 of article (9)
26	2 1the. 1tut	A3	Correlation and Regression	1-10 of article (9)	1 – 4 of article (9)
27	2	A3	Correlation and	1-10	1 – 4 of article

	1the. 1tut		Regression	article (9)	(9)
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28	2 1the. 1tut	A4	Other Chi-Square Tests	1-10 of article (9)	1 – 4 of article (9)
29	2 1the. 1tut	A4	Other Chi-Square Tests	1-10 of article (9)	1 – 4 of article (9)
30	2 1the. 1tut	A4	Other Chi-Square Tests	1-10 of article (9)	1 – 4 of article (9)

11. Infrastructure	
1. Books Required reading:	<ul style="list-style-type: none"> <li>• Elementary Statistics: A step by step approach, by Allan G. Bluman, 6<sup>th</sup> edition</li> <li>• Statistics for Engineering and Sciences, by William Mendenhall and William Mendenhall, 5<sup>th</sup> edition.</li> <li>Applied Statistics and Probability for Engineers, 3<sup>rd</sup> Edition, by Douglas C. Montgomery and George C. Runger.</li> </ul>
2. Main references (sources)	-----
A- Recommended books and references (scientific journals, reports...).	-----
B-Electronic references, Internet sites...	-----

## 12. The development of the curriculum plan

1. Teaching Institution	College of Engineering University of Baghdad
2. University Department/Centre	Civil Engineering Department (CED)



3. Course title/code	<b>FIRST YEAR Computer Programming /GE 109</b>
4. Modes of Attendance offered	Annual System ; There is only one mode of delivery, which is a “Day Program”. The students are full time students, and on campus. They attend full day program in face-to-face mode. The academic year is composed of 30-week regular subjects.
5. Semester/Year	1 <sup>st</sup> and 2 <sup>nd</sup> /Academic Year 2022–2023
6. Number of hours tuition (total)	120 hrs./4 hrs. per week
7. Date of production/revision of this specification	01/10/2022
8. Aims of the Course	
<ol style="list-style-type: none"> <li>1. Introduce the History of Computing and Decimal numbering systems and bilateral.</li> <li>2. Introduce the Algorithms and flowcharts.</li> <li>3. Explain the Quick Basic programming languages as follows: <ol style="list-style-type: none"> <li>3.1 Constant, variable, input, output.</li> <li>3.2 Mathematical expressions and library functions.</li> <li>3.3 Control statements (GOTO, ON...GOTO, IF statement).</li> <li>3.4 Counters, loops and the FOR - NEXT statements.</li> <li>3.5 Selected case.</li> <li>3.5 Matrices and Arrays</li> <li>3.6 Defined Functions, subroutine and subprogram.</li> <li>3.7 Format statement.</li> </ol> </li> <li>4. Introduce students to the computer’s hardware</li> <li>5. Windows system.</li> <li>6. Microsoft Word.</li> <li>7. Microsoft Excel.</li> <li>8. Microsoft Power Point.</li> </ol>	
9. Learning Outcomes, Teaching, Learning and Assessment Methods	

## A- Cognitive goals.

- A1. Learning how to transform the numbers from decimal to binary system and from binary to decimal system.
- A2. Learning how to write the algorithms and how to draw the flowchart sketches.
- A3. Learning how to deal with the numerical and string constant and variable.
- A4. Learning the types of input and output statements
- A5. Learning the mathematical expressions and library functions in the Basic Language.
- A6. Learning how to use the control statements (GOTO, ON...GOTO, IF statements) to make the conditions in the programs.
- A7. Learning how to use the Counters, loops and the FOR - NEXT statements in the series programming.
- A9. Learning how to use the (Selected case) in programming.
- A10. Learning how to create matrix, the mathematical operation and the properties of matrices.
- A11. Learning how to arrange the elements of matrix ascending or descending.
- A12. Learning how to change the locations of the matrix elements and Learning how to create two-dimensional matrix, the mathematical operation and the properties of matrices.
- A13. Learning how to use the Defined Functions, subroutine and subprogram in the programs.
- A14. Learning the types of Format statement.
- A15. Introduce students to the computer's hardware
- A16. Introducing the student on how to use Microsoft WORD software
- A17. Introducing the student on how to use Microsoft EXCIL software
- A18. Introducing the student on how to use Microsoft POWER POINT software.

## B. The skills goals special to the course.

- B1. Analysis and design software.

## Teaching and Learning Methods

- 1) Lectures.
- 2) Tutorials.
- 3) Homework and Assignments.
- 4) Lab. Experiments.
- 5) Tests and Exams.

- 6) In-Class Questions and Discussions.
- 7) Connection between Theory and Application.
- 8) Extracurricular Activities.
- 9) Seminars.
- 10) In- and Out-Class oral conversations.
- 11) Reports, Presentations, and Posters.

#### Assessment methods

- 1. Examinations, Tests, and Quizzes.
- 2. Extracurricular Activities.
- 3. Student Engagement during Lectures.
- 4. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

#### C. Affective and value goals

- C1. Increasing student's self-confidence to perform his (homework, classwork and assessment) within the corresponding time.
- C2. Encouraging the teamwork between the students.
- C3. Cooperating the universal activities.
- C4. Supporting the extra-curricular university activities and urging students to participate in them.

#### Teaching and Learning Methods

- 1. Homework and Assignments.
- 2. In-Class Questions and Discussions.
- 3. Field Trips.
- 4. Extracurricular Activities.
- 5. Seminars.
- 6. In- and Out-Class oral conversations.
- 7. Reports, Presentations, and Posters.

#### Assessment methods

- 1. Extracurricular Activities.
- 2. Student Engagement during Lectures.
- 3. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

#### D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

- D1. Increasing the ability to use the design and analysis software.

### ***10. Course Structure***

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	4 2 the. 2tut	A1, A14	History of Computing and Decimal numbering systems and bilateral & computers hardware	1-11of article (9)	1 – 4 of article (9)
2	4 2 the. 2tut	A2, A14	Algorithms and flowcharts Windows, start menu	1-11of article (9)	1 – 4 of article (9)
3	4 2 the. 2tut	A3, A14	Basic language programming - variables and constants Desktop, search, screen saver, control panels	1-11of article (9)	1 – 4 of article (9)
4	4 2 the. 2tut	A1, A2, A3	Mathematical expressions and library functions Applications on Quick Basic	1-11of article (9)	1 – 4 of article (9)
5	4 2 the. 2tut	A3, A4	Input statement Quiz Applications on Quick Basic	1-11of article (9)	1 – 4 of article (9)

6	4 2 the. 2tut	A4, A15	Output statements and printing  Office-word starting, tools, format, insert  Quiz	1-11of article (9)	1 – 4 of article (9)
7	4 2 the. 2tut	A5, A15	CLS, REM sentences  Office-word starting, tools, format, insert	1-11of article (9)	1 – 4 of article (9)
8	4 2 the. 2tut	A6, A15	control statements(GOT O, ON...GOTO, IF statements)  Header, footer, border, paragraph	1-11of article (9)	1 – 4 of article (9)
9	4 2 the. 2tut	A7	Counters  Quiz	1-11of article (9)	1 – 4 of article (9)
10	4 2 the. 2tut	A12	Quiz Create Pdf, print	1-11of article (9)	1 – 4 of article (9)
11	4 2 the. 2tut	A7	loops and series Applications on Quick Basic	1-11of article (9)	1 – 4 of article (9)
12	4 2 the.	A7	the FOR - NEXT statements in	1-11of article (9)	1 – 4 of article (9)

	2tut		the series Applications on Quick Basic		
13	4 2 the. 2tut	A7	Quiz	1-11of article (9)	1 – 4 of article (9)
14	4 2 the. 2tut	A8	Selected case Applications on Quick Basic	1-11of article (9)	1 – 4 of article (9)
15	4 2 the. 2tut	A7	DO ...LOOP statement Applications on Quick Basic	1-11of article (9)	1 – 4 of article (9)
16	4 2 the. 2tut	A7	Quiz	1-11of article (9)	1 – 4 of article (9)
17	4 2 the. 2tut	A12, A16	Matrices and Arrays  Office-Excel starting, worksheets	1-11of article (9)	1 – 4 of article (9)
18	4 2 the. 2tut	A10, A16	Mathematical operation and the properties of matrices.  Equations, functions, graphs	1-11of article (9)	1 – 4 of article (9)
19	4 2 the. 2tut	A10, A16	Ascending and descending order  Tools properties, insert	1-11of article (9)	1 – 4 of article (9)
20	4	A11,	Diagonals, row and columns,	1-11of article	1 – 4 of article (9)

	2 the. 2tut	A16	triangles properties. Tutorials	(9)	
21	4 2 the. 2tut	A11	Change the locations of the matrix elements Quiz	1-11 of article (9)	1 – 4 of article (9)
22	4 2 the. 2tut	A11	Applications on Quick Basic	1-11 of article (9)	1 – 4 of article (9)
23	4 2 the. 2tut	A11, A17	Operations on Two dimensional array Office-Power Point- starting new, slides	1-11 of article (9)	1 – 4 of article (9)
24	4 2 the. 2tut	A11, A17	Multiplication on Two dimensional array View types, insert	1-11 of article (9)	1 – 4 of article (9)
25	4 2 the. 2tut	A11, A17	Creating the largest and smallest element Tutorials	1-11 of article (9)	1 – 4 of article (9)
26	4 2 the. 2tut	A11, A17	Quiz	1-11 of article (9)	1 – 4 of article (9)
27	4 2 the. 2tut	A12	Defined Functions Applications on Quick Basic	1-11 of article (9)	1 – 4 of article (9)
28	4	A12	Subroutine and	1-11 of article	1 – 4 of article (9)

	2 the. 2tut		subprogram in the (9)programs.  Applications on Quick Basic		
29	4 2 the. 2tut	A13	Format statement  Applications on Quick Basic	1-11of article (9)	1 – 4 of article (9)
30	4 2 the. 2tut	A13	Quiz	1-11of article (9)	1 – 4 of article (9)

11. Infrastructure	
1. Books Required reading:	1-Programming with Quick Basic –Salah R. Hamza 2-Basic language programming - Mehdi Fadel 3-Basic language programming - Salah Messenger Hamza 4- BASIC practical for personal computers - Aladdin Shamsuddin 5-Basic (Robert L. Albercht) 6- An Introduction to Computer Science and Programming with Basic Language-Salam Al Ammri.
2. Main references (sources)	
A- Recommended books and references (scientific journals, reports...).	
B-Electronic references, Internet sites...	

## 12. The development of the curriculum plan

1. Teaching Institution	College of Engineering University of Baghdad
2. University Department/Centre	Civil Engineering Department (CED)



3. Course title/code	<b>FIRST YEAR</b> <b>Technical English / GE 111</b>
4. Modes of Attendance offered	Annual System; There is only one mode of delivery, which is a “Day Program”. The students are full time students, and on campus. They attend full day program in face-to-face mode. The academic year is composed of 30-week regular subjects.
5. Semester/Year	1 <sup>st</sup> and 2 <sup>nd</sup> /Academic Year 2022–2023
6. Number of hours tuition (total)	60 hrs./2 hrs. per week
7. Date of production/revision of this specification	01/10/2022
8. Aims of the Course	
<p>A- A great deal of successful language learning comes from experiences in which the learning is largely unconscious.</p> <p>B- This course aimed to make the student’s interest in the career information presented will increase his or her ability to communicate more easily in English.</p>	

9. Learning Outcomes, Teaching, Learning and Assessment Method
<p>A- Cognitive goals.</p> <p>A1. This Course is to introduce the student to the particular vocational area in which he or she is involved.</p> <p>A2. The duties of different kinds of jobs are discussed, as well as the problems that might be encountered at work.</p> <p>A3. Different phases of the civil engineering field are discussed, together with some of the methods involved in designing structures for a number of different purposes.</p> <p>A4. The aptitudes and education that an engineer must have are also discussed, as well as some of the specific job areas in which he or she may work.</p> <p>A5. This course will be an introduction to the different kinds of work in the field of civil engineering.</p> <p>B. The skills goals special to the course.</p>

Teaching and Learning Methods
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1. Lectures.
2. Tutorials.
3. Homework and Assignments.
4. Lab. Experiments.
5. Tests and Exams.
6. In-Class Questions and Discussions.
7. Connection between Theory and Application.
8. Field Trips.
9. Extracurricular Activities.
10. Seminars.
11. In- and Out-Class oral conversations.
12. Reports, Presentations, and Posters.

#### Assessment methods

1. Examinations, Tests, and Quizzes.
2. Extracurricular Activities.
3. Student Engagement during Lectures.
4. Responses Obtained from Students. Questionnaire about Curriculum and Faculty Member (Instructor).

#### C. Affective and value goals

- C1. Increasing student's self-confidence to perform his (homework, classwork and assessment) within the corresponding time.
- C2. Encouraging the teamwork between the students.
- C3. Cooperating the universal activities.
- C4. Supporting the extra-curricular university activities and urging students to participate in them.

#### Teaching and Learning Methods

1. Homework and Assignments.
2. In-Class Questions and Discussions.
3. Field Trips.
4. Extracurricular Activities.
5. Seminars.
6. In- and Out-Class oral conversations.
7. Reports, Presentations, and Posters.

#### Assessment methods

1. Extracurricular Activities.
2. Student Engagement during Lectures.
3. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

10. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2 1the. 1tut.	A1, A2	Chapter 1	1-12 of article (9)	1 – 4 of article (9)
2	2 1the. 1tut	A1, A2	Chapter 1	1-12 of article (9)	1 – 4 of article (9)
3	2 1the. 1tut	A1, A2	Chapter 2	1-12 of article (9)	1 – 4 of article (9)
4	2 1the. 1tut	A2, A3, A4, A5	Chapter 2	1-12 of article (9)	1 – 4 of article (9)
5	2 1the. 1tut	A2, A3, A4, A5	Chapter 3	1-12 of article (9)	1 – 4 of article (9)
6	2 1the. 1tut	A2, A3, A4, A5	Chapter 3	1-12 of article (9)	1 – 4 of article (9)

7	2 1the. 1tut	A2, A3, A4, A5	Chapter 4	1-12 of article (9)	1 – 4 of article (9)
8	2 1the. 1tut	A2, A3, A4, A5	Chapter 4	1-12 of article (9)	1 – 4 of article (9)

9	2 1the. 1tut	A2, A3, A4, A5	Chapter 5	1-12 of article (9)	1 – 4 of article (9)
10	2 1the. 1tut	A2, A3, A4, A5	Chapter 5	1-12 of article (9)	1 – 4 of article (9)
11	2 1the. 1tut	A2, A3, A4, A5	Chapter 6	1-12 of article (9)	1 – 4 of article (9)
12	2 1the. 1tut	A2, A3, A4, A5	Chapter 6	1-12 of article (9)	1 – 4 of article (9)
13	2 1the. 1tut	A2, A3, A4, A5	Chapter 7	1-12 of article (9)	1 – 4 of article (9)
14	2 1the. 1tut	A2, A3, A4, A5	Chapter 7	1-12 of article (9)	1 – 4 of article (9)
15	2 1the. 1tut	A2, A3, A4, A5	Presentations	1-12 of article(9)	1 – 4 of article (9)
16	2 1the. 1tut	A2, A3, A4, A5	Presentations	1-12 of article (9)	1 – 4 of article (9)

17	2 1the. 1tut	A2, A3, A4, A5	Chapter 8	1-12 of article (9)	1 – 4 of article (9)
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18	2 1the. 1tut	A2, A3, A4, A5	Chapter 8	1-12 of article (9)	1 – 4 of article (9)
19	2 1the. 1tut	A2, A3, A4, A5	Chapter 9	1-12 of article (9)	1 – 4 of article (9)
20	2 1the. 1tut	A2, A3, A4, A5	Chapter 9	1-12 of article (9)	1 – 4 of article (9)
21	2 1the. 1tut	A2, A3, A4, A5	Chapter 10	1-12 of article(9)	1 – 4 of article (9)
22	2 1the. 1tut	A2, A3, A4, A5	Chapter 10	1-12 of article (9)	1 – 4 of article (9)
23	2 1the. 1tut	A2, A3, A4, A5	Chapter 11	1-12 of article (9)	1 – 4 of article (9)
24	2 1the. 1tut	A2, A3, A4, A5	Chapter 11	1-12 of article (9)	1 – 4 of article (9)
25	2 1the. 1tut	A2, A3, A4, A5	Chapter 12	1-12 of article (9)	1 – 4 of article (9)
26	2 1the. 1tut	A2, A3, A4, A5	Chapter 12	1-12 of article (9)	1 – 4 of article (9)

27	2 1the. 1tut	A2, A3, A4, A5	Chapter 13	1-12 of article (9)	1 – 4 of article (9)
28	2 1the. 1tut		Chapter 13	1-12 of article (9)	1 – 4 of article (9)
29	2 1the. 1tut		Chapter 14	1-12 of article (9)	1 – 4 of article (9)
30	2 1the. 1tut		Chapter 14	1-12 of article (9)	1 – 4 of article (9)

11. Infrastructure	
1. Books Required reading:	New Headway Plus (Beginner Student's Book and Student's Workbook with Key), by Liz and John Soars
2. Main references (sources)	-----
A- Recommended books and references (scientific journals, reports...).	-----
B-Electronic references, Internet sites...	-----

## 12. The development of the curriculum plan

1. Teaching Institution	College of Engineering University of Baghdad
2. University Department/Centre	Civil Engineering Department (CED)

3. Course title/code	<b>FIRST YEAR</b> <b>Arabic Language /GE 113</b>
4. Modes of Attendance offered	Annual System; There is only one mode of delivery, which is a “Day Program”. The students are full time students, and on campus. They attend full day program in face-to-face mode. The academic year is composed of 30-week regular subjects.
5. Semester/Year	1 <sup>st</sup> and 2 <sup>nd</sup> /Academic Year 2022–2023
6. Number of hours tuition (total)	30 hrs./1 hrs. per week
7. Date of production/revision of this specification	01/10/2022
8. Aims of the Course	<p>أن ينشأ الطالب على حب اللغة العربية. لغة القرآن الكريم 1-</p> <p>في الاتصال بالآخرين عن طريق 2- أن يكتسب الطالب القدرة على استعمال اللغة استعمالاً صحيحاً التحدث والكتابة والاستماع والقراءة. مما ييسر لهم أمورهم ويعينهم على قضاء حوائجهم ومصالحهم.</p> <p>أن يتزود الطالب بما يساعدهم على الاستفادة من أوقات فراغهم عن طريق القراءة 3-</p> <p>والطالع. 4- أن يكتسب الطلبة القدرة على التعبير عن أنفسهم وما يقع تحت حواسهم نطقاً وكتابةً 5- أن يتزود الطالب بثروة لغوية عن طريق تزويدهم ببعض الألفاظ والتراكيب</p> <p>أن يكتسب الطلبة القدرة على التعبير عن أنفسهم من خلال المهارات اللغوية المتصلة بـ: التحدث 6- القراءة _ الاستماع _ الكتابة.</p> <p>تنمية الميل إلى القراءة والمطالعة لدى الطلبة 7-</p> <p>التعرف على مواطن الجمال في اللغة العربية وأدائها 8-</p> <p>: أن يكتسب الطالب القدرة على دراسة فروع اللغة العربية 9-</p> <p>النحو _ القراءة _ الأناشيد (المحفوظات) (الإملاء _ التعبير _ الخط</p> <p>أن يتدرب الطالب على التعبير الصحيح عن معنى ما يقرأ أو يسمع 10-</p>

9. Learning Outcomes, Teaching ,Learning and Assessment Methode

## A- Cognitive goals .

تدريب الطلبة على سلامة النطق وحسن الإلقاء والتعبير بنبرات صوتية واضحة.و تعويدهم على 1- مواجهة المواقف بشجاعة ، وبتث فيهم الثقة بالنفس.و غرس القدرة على فهم ما يقرؤون وما يسمعون في سرعة ودقة. و تزويدهم بكثير من الألفاظ والتراكيب والجمل والأساليب وتنمي ثروتهم اللغوية وتزيد ثقافتهم-. وتكسب الطلبة عادة حب القراءة ومصاحبة الكتاب. تنمية الحصيلة اللغوية لدى الطالب وذلك بتزويده بالمفردات والتراكيب والعبارات الجديدة-. وتنمية القدرة على تتبع ما يسمع ، مع فهمه فهما صحيحا ونقده والانتفاع به

تدريب الطلبة على كتابة الكلمات كتابة صحيحة ، وتثبيت صورها في أذهان الطلبة 2- والقدرة على استعادة تلك الصور عند الكتابة. وتعويدهم على الانتباه وقوة الملاحظة والدقة والترتيب والتنسيق. وتدريب حواسهم على الإجابة والتقان وهذه الحواس هي: \_الذن التي تسمع واليد التي تكتب والعين التي تبصر الجواب وهذا يساعد على اختبار معلومات الطلبة وتنمية قدراتهم على التعبير وتنمية المهارة الكتابية غير المنظورة لديهم

تحقيق التكامل في تدريس اللغة العربية بحيث تخدم المــــالء فروع اللغة العربية 3- الأخرى وإثراء الثروة المعرفية لديهم التي تزوده بها النصوص الإمالية الهادفة و تدربهم على إدراك الفروق الدقيقة بين الحروف المتقاربة المخارج

تقويم السنة الطلبة ،ووقايتهم من الخطأ ، وتكوين عادات لغوية سليمة تمكنهم من 4-

استعمال الألفاظ والجمل استعمال صحيحا خاليا من الأخطاء النحوية التي تذهب بجمال الكالم

وروعته. وتعويدهم على دقة الملاحظة ، والتمييز بين الخطأ والصواب فيما يسمعون أو يقرؤون وإدراك وظائف الكلمات في الجمل مما يساعد على فهم مواقعها المختلفة فصال عن إيقاف الطلبة لتلك الأوضاع والصيغ وتبين على أوضاع اللغة وصيغها ؛ ألن قواعد النحو تعد وصفا علمياً

التغييرات التي تحدث لألفاظ في مواقعها المختلفة

القدرة على توضيح الأفكار باستخدام الكلمات المناسبة والأسلوب المناسب.و تنمية قدرة 5-

كرة المعبر عنها مما يضيف عليها جمال الطالب على تنسيق عناصر الف وقوة تؤثر في السامع والقارئ.و تنمية قدرة الطالب على نقل وجهة نظره إلى غيره.تنمية التفكير وتنشيطه وتنظيمه والعمل على تغذية خيال الطالب بعناصر النمو والبتكار

## B. The skills goals special to the course.

### Teaching and Learning Methods

- 1) Lectures.
- 2) Tutorials.
- 3) Homework and Assignments.
- 4) Tests and Exams.
- 5) In-Class Questions and Discussions.
- 6) Extracurricular Activities.
- 7) Seminars.
- 8) In- and Out-Class oral conservations.



9) Reports, Presentations, and Posters.

Assessment methods

1. Examinations, Tests, and Quizzes.
2. Extracurricular Activities.
3. Student Engagement during Lectures.
4. Responses Obtained from Students, Questionnaire about Curriculum and Faculty Member (Instructor).

C. Affective and value goals

- C1. Increasing student's self-confidence to perform his (homework, classwork and assessment) within the corresponding time.
- C2. Encouraging the teamwork between the students.
- C3. Cooperating the universal activities.
- C4. Supporting the extra-curricular university activities and urging students to participate in them.

Teaching and Learning Methods

1. Homework and Assignments.
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D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)