

# MODULE DESCRIPTION – Foundation Eng. I

## وصف المادة الدراسية (جيولوجيا)

<b>Module Information</b> معلومات المادة الدراسية			
<b>Module Title</b>	<b>Engineering Geology</b>		<b>Module Delivery</b>
<b>Module Type</b>	<b>Core</b>		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
<b>Module Code</b>	CIREQ 122		
<b>ECTS Credits</b>	4		
<b>SWL (hr/sem)</b>	100		
<b>Module Level</b>		<b>Semester of Delivery</b>	2
<b>Administering Department</b>	CIER	<b>College</b>	
<b>Module Leader</b>	Assist. Lec Ali Kadhim Hassan	<b>e-mail</b>	<a href="mailto:ali.k.hassan@nahrainuniv.edu.iq">ali.k.hassan@nahrainuniv.edu.iq</a>
<b>Module Leader's Acad. Title</b>	Lecturer	<b>Module Leader's Qualification</b>	M.Sc.
<b>Module Tutor</b>		<b>e-mail</b>	
<b>Peer Reviewer Name</b>	Name	<b>e-mail</b>	E-mail
<b>Scientific Committee Approval Date</b>	01/06/2023	<b>Version Number</b>	1.0

<b>Relation with other Modules</b> العلاقة مع المواد الدراسية الأخرى			
<b>Prerequisite module</b>	Material Engineering	<b>Semester</b>	5 & 6
<b>Co-requisites module</b>	None	<b>Semester</b>	

## Module Aims, Learning Outcomes and Indicative Contents

### أهداف المادة الدراسية و نتائج التعلم و المحتويات الارشادية

<p><b>Module Aims</b> أهداف المادة الدراسية</p>	<p>Graduation of civil engineers qualified to work in their various fields of specialization:</p> <ol style="list-style-type: none"><li>1. Providing the student with skills to deal with developments and progress in the field of specialization.</li><li>2. Providing the student with higher ability to understand principles of science .</li><li>3. - Instilling the spirit of diligence and perseverance and encouraging them to create and innovate.</li></ol>
<p><b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"><li>1. Understanding the importance of earth compositing materials.</li><li>2. Ability to identify geology science and its branches.</li><li>3. Learning the connection between civil engineering and geology.</li><li>4. An ability to recognize material forming earth surface that can be used in civil engineering fields.</li><li>5. Ability to analyze and specify minerals and rocks by their chemical and physical properties.</li><li>6. Ability to use the terms and forming formulas.</li></ol>
<p><b>Indicative Contents</b> المحتويات الارشادية</p>	<p>Indicative content includes the following.</p> <ul style="list-style-type: none"><li>- <b>Identify Geology</b> Introduction, geology as a term and science and the branches of geology . [3 hrs]</li><li>- <b>Engineering Geology</b> Explanation of Engineering geology and the connection with Civil engineers by Geotechnical engineering. [8hrs]</li><li>- <b>Earth Profile</b> Brief description for earth profile , then identifying its components. [3 hrs]</li><li>- <b>Minerals</b> Definition , classification and properties , [16 hr]</li><li>- <b>Rocks</b> Definitions , Types and common kinds [16 hrs]</li><li>-</li></ul>

## Learning and Teaching Strategies

### أستراتيجيات التعلم و التعليم

<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Introduce students to science of geology</li> <li>• Self-regulated learning (i.e., Identifying , classification and evaluation ).</li> <li>• Practice testing (short question answers and exams).</li> <li>• Self-explanation (i.e., explaining to oneself how new information is related to old information or explain steps taken when solving a problem or a task).</li> </ul>
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## Student Workload (SWL)

### الحمل الدراسي للطالب

<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	48	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب اسبوعيا	3
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	47	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب اسبوعيا	3.3
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	95		

## Module Evaluation

### تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
<b>Formative assessment</b>	<b>Quizzes</b>	2	10% (10)	5, 10	LO #1, 2, 3, 4, and 5
	<b>Assignments</b>	3	10% (10)	2, 7, 12	LO # All
	<b>Exam</b>	1 hr	10% (10)	6	LO # 1-5
	<b>Report</b>	1	10% (10)	13	LO # All
<b>Summative assessment</b>	<b>Midterm Exam</b>	2 hr	10% (10)	10	LO # 1-6
	<b>Final Exam</b>	3hr	50% (50)	16	All
<b>Total assessment</b>		100% (100 Marks)			

## Delivery Plan (Weekly Syllabus)

المنهاج السبوعي النظري

	Material Covered
<b>Week 1</b>	Introduction – Geology Science
<b>Week 2</b>	Continue- Branches of Geology
<b>Week 3</b>	Engineering Geology
<b>Week 4</b>	Earth Profile
<b>Week 5</b>	Minerals
<b>Week 6</b>	Minerals Properties
<b>Week 7</b>	Earth profile
<b>Week 8</b>	Rocks
<b>Week 9</b>	Igneous Rocks
<b>Week 10</b>	Common Igneous rocks
<b>Week 11</b>	Sedimentary Rocks
<b>Week 12</b>	Formation processes and common rocks
<b>Week 13</b>	Metamorphic rocks
<b>Week 14</b>	Common rockes
<b>Week 15</b>	Folds
<b>Week 16</b>	<b>Preparatory week before the final Exam</b>

## Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
<b>Required Texts</b>	BANGAR K.M (1995) "Geology ; General and Engineering'	Available online
<b>Recommended Texts</b>	Lutgents, F.K & Tarbuck,E.J (2009) "Essentials of Geology"	Yes
<b>Others</b>	<ul style="list-style-type: none"> <li>Notebook prepared by the instructor of the course</li> </ul>	

## 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	مؤسّط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (تزيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

**Note:** Marks 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.