

# MODULE DESCRIPTION FORM

## نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	<b>Method of Construction and Estimation</b>		Module Delivery	
Module Type	Core		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	<b>CIV027</b>			
ECTS Credits	5			
SWL (hr/sem)	<b>125</b>			
Module Level	UGIV	Semester of Delivery	8	
Administering Department	CV101	College	Civil Engineering College	
Module Leader	Saadi Shartooch Sharqi		e-mail	eng.saadish@uoanbar.edu.iq
Module Leader's Acad. Title	Teacher		Module Leader's Qualification	M.Sc.
Module Tutor			e-mail	E-mail
Peer Reviewer Name	Name		e-mail	E-mail
Scientific Committee Approval Date	01/06/2023		Version Number	1.0

Relation with other Modules				
العلاقة مع المواد الدراسية الأخرى				
Prerequisite module	None		Semester	
Co-requisites module	None		Semester	

## Module Aims, Learning Outcomes and Indicative Contents

### أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p><b>Module Aims</b> أهداف المادة الدراسية</p>	<ol style="list-style-type: none"><li>1. Preparation of estimate, determination of quantities of items and labor requirement of civil engineering works.</li><li>2. Preparation of specification of construction items.</li><li>3. To introduce the students in depth knowledge of professional practice as well the quantity analysis of construction works like, multi-storied structures, Water works &amp; sanitary works, Irrigation works, Road estimates, culverts, etc..</li><li>4. Learn how to apply engineering fundamentals and analyses to planning, selection, and utilization of construction equipment.</li></ol>
<p><b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"><li>1. Students shall have a reasonable knowledge about the various construction procedures for sub to super structure</li><li>2. Students shall have a reasonable knowledge about the equipment needed for construction of various types of structures from foundation to super structure.</li><li>3. Students shall be able to estimate the material quantities, prepare a bill of quantities, make specifications and prepare tender documents</li><li>4. Students should also be able to prepare value estimates.</li></ol>
<p><b>Indicative Contents</b> المحتويات الإرشادية</p>	<p>Indicative content includes the following.</p> <p><b><u>Chapter one</u></b> Introduction : Definitions and reviews, - estimation: Classification and Select definitions , assessment: General Requirements, Specifications: Additional Requirements, Types Of estimation: [6 hrs]</p> <p><b><u>Chapter Two</u></b> Estimating the construction work items for buildings in a detailed way: Earthen excavations for strip foundations, Covering with crushed stone under the foundation [10 hrs]</p> <p><b><u>Chapter Three</u></b> Concrete works: Unreinforced concrete works; Reinforced concrete works, • Estimating the quantities of reinforcing steel for the strip foundation, Wood molding work [10 hrs]</p> <p><b><u>Chapter Four</u></b> Road works, Road works sections [4 hrs]</p> <p><b><u>Chapter Five</u></b> pricing, Estimate the cost of materials, Estimate the cost of concrete works_[10 hrs]</p> <p><b><u>Chapter Six</u></b></p>

	<p>Earthworks account, Types of earthworks accounts, Cross-Section Method, Borrow – Pit Method [10 hrs]</p> <p><b><u>Chapter Seven</u></b></p> <p>Construction machinery productivity, Shovel productivity, Buiidozer productivity, [6 hrs]</p> <p><b><u>Chapter Eight</u></b></p> <p>Scraper productivity, The scraping mechanism, Improving the work of the scraper, [6 hrs]</p> <p><b><u>Chapter Nine</u></b></p> <p>Excavating Equipment, Excavating Equipment Types, Power Shovel, Power Shovel productivity, The effect of loading and excavating machine size on productivity, The effect of road slope on soil transportation cost, The effect of rolling resistance on soil transportation cost, The effect of altitude above sea level on the cost of soil transportation, [10 hrs]</p> <p><b><u>Chapter Ten</u></b></p> <p>Compaction Equipment, Compaction Equipment Types, Soil stabilization methods and earthworks, [4 hrs]</p>
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### Learning and Teaching Strategies

#### استراتيجيات التعلم والتعليم

<b>Strategies</b>	<p>Foundation engineering courses require effective learning and teaching strategies to ensure students develop a strong understanding of complex concepts and their practical applications. The range of strategies that can enhance the learning experience for students in foundation engineering courses. These strategies include lecture-based teaching, practical applications, problem-solving assignments, group work and discussions, technology integration, field trips and site visits, guest speakers, assessments and feedback, continuous learning, and encouraging self-directed learning. By incorporating these strategies, educators can create an engaging and comprehensive learning environment that equips students with the knowledge, skills, and critical thinking abilities necessary for success in the field of Method of Construction and Estimation.</p>
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### Student Workload (SWL)

#### الحمل الدراسي للطالب

<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	63	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب أسبوعياً	4.0
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	87	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعياً	5.8
<b>Total SWL (h/sem)</b>	150		

الحمل الدراسي الكلي للطلاب خلال الفصل					
<b>Module Evaluation</b> تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	4	10% (10)	3, 6,10,14	LO #1, 3, and 4
	Assignments	2	5% (5)	2, 12	LO # 3 and 4
	Projects / Lab.				
	Report	1	5% (5)	13	LO # 2 - 4
Summative assessment	Midterm Exam	2 hr	20% (20)	7	LO # 1-3
	Final Exam	3hr	60% (60)	16	All
Total assessment			100% (100 Marks)		

<b>Delivery Plan (Weekly Syllabus)</b> المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Construction Practices
Week 2	Sub Structure Construction
Week 3	Super Structure Construction
Week 4	Repair And Rehabilitation
Week 5	Construction Equipment
Week 6	The Production of Equipment
Week 7	Introduction to Estimates
Week 8	Estimate of Buildings
Week 9	Rate Analysis of Different Items for Construction Work
Week 10	Mid-term Exam
Week 11	Estimate of Other Structures
Week 12	Estimate of Earthwork
Week 13	Specification and Tenders
Week 14	Valuation in Construction
Week 15	Report Preparation
Week 16	Preparatory week before the final Exam

## Delivery Plan (Weekly Lab. Syllabus)

### المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Lab 1:
Week 2	Lab 2:
Week 3	Lab 3:
Week 4	Lab 4:
Week 5	Lab 5:
Week 6	Lab 6:
Week 7	Lab 7:

## Learning and Teaching Resources

### مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	S. W. Nunnally, Construction Methods and Management, 8th Edition by, 2010	Yes
Recommended Texts	Frank R. Dagostino and Steven J. Peterson, Estimating in Building Construction, Prentice Hall, 7th ed., 2011	Yes
Websites	<a href="https://www.uoanbar.edu.iq/staff-page.php?ID=727">https://www.uoanbar.edu.iq/staff-page.php?ID=727</a>	

## 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:** 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.