

1. أسم المقرر:					
<b>Economic mathematics</b>					
2. رمز المقرر:					
3. الفصل / السنة:					
<b>First course</b>					
4. تاريخ أعداد هذا الوصف:					
<b>2025/9/2</b>					
5. أشكال الحضور المتاحة:					
<b>In-person + online (when need)</b>					
6. عدد الساعات الدراسية (الكلية) / عدد الوحدات (الكلية) :					
<b>3hours / 3 units</b>					
7. أسم مسؤول المقرر الدراسي					
الإيميل: <a href="mailto:ayat.qais@uowa.edu.iq">ayat.qais@uowa.edu.iq</a> الاسم: م.م. ايات قيس محمد علي					
8. أهداف المقرر					
<ul style="list-style-type: none"> <li>✓ <input type="checkbox"/> Introduce the student to the basic concepts of economic mathematics.</li> <li>✓ <input type="checkbox"/> Understand the mathematical tools necessary for economic analysis.</li> <li>✓ <input type="checkbox"/> Provide the student with the ability to formulate economic models and transform economic problems into mathematical formulas.</li> <li>✓ <input type="checkbox"/> Develop the student's ability to correctly solve mathematical equations.</li> <li>✓ <input type="checkbox"/> Enhance the student's skill in handling quantitative data and linking it to economic concepts.</li> </ul>			<b>Course objectives</b>		
9. استراتيجيات التعليم والتعلم					
<ul style="list-style-type: none"> <li>✓ <input type="checkbox"/> Theoretical lectures supported by presentations (Mindomo).</li> <li>✓ <input type="checkbox"/> Classroom discussions and mathematical problem solving.</li> <li>✓ <input type="checkbox"/> Project-based learning (preparing short reports and research).</li> <li>✓ <input type="checkbox"/> Training on how to formulate mathematical models for economic problems.</li> <li>✓ <input type="checkbox"/> Utilizing electronic and library resources.</li> </ul>					
10. بنية المقرر					
The week	Watches	Required learning outcomes	Unit name/ topic	Teaching method	Evaluation Meth

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1	3	A brief overview of economic mathematics	Concept of economic mathematics	a lecture	Daily
2	3	Review previous courses	Review of some previous courses	a lecture	Daily
3	3	The concept and nature of mathematics	The importance of using mathematics for economists	a lecture	Daily
4	3	Derivative rules	The topic of derivatives and their rules	a lecture	Daily
5	3	First-order optimization	Variable optimization of revenue, cost and profit functions	a lecture	Daily
6	3	Daily exam	Daily exam	exam	Exam
7	3	Bivariate optimization	Unconstrained bivariate optimization	a lecture	Daily
8	3	Daily exam	Daily exam	exam	Exam
9	3	Constrained optimization	Solve the constrained optimization using the Lagrange method	a lecture	Daily
10	3	Consumer equilibrium	Determining optimal satisfaction through consumption of two goods	a lecture	Daily
11	3	Implicit function	Implicit function	a lecture	Daily
12	3	Total differentiation	Total differentiation	a lecture	Daily
13	3	Midterm exam	Midterm exam	Exam	Exam

14	3	Value functions	Value functions	a lecture	Daily
15	3	Comparative statistics	Comparative statistics	a lecture	Daily
<b>11. تقييم المقرر</b>					
<p><b>The grade is distributed out of 100 based on the student's assigned tasks, such as daily preparation, daily, oral, and monthly exams, written work, reports, etc.</b></p> <p><b>A. Classroom preparation and participation: 10 points</b></p> <p><b>B. Quizzes: 10 points</b></p> <p><b>C. Reports and assignments: 20 points</b></p> <p><b>D. Monthly exam: 10 points</b></p> <p><b>E. Final exam: 50 points</b></p> <p><b>أ. F. Total = 100 points</b></p>					
<b>12. مصادر التعلم والتدريس</b>					
	لا يوجد	الكتب المقررة المطلوبة			
	- -Book (Human Resources Management, Al-Salem, Mu'ayyad Saeed, Saleh, Adel Harhoush.)	المراجع الرئيسية			
		الكتب والمراجع الساندة التي يوصى بها			
	Journals and scientific research in economic mathematics	المراجع الالكترونية، مواقع الانترنت			