

**Ministry of Higher Education and Scientific Research
Academic Supervision and Evaluation Commission
Quality Assurance and Academic Accreditation Department**



Academic Program Description Form for Colleges and Institutes

**University: Warith Al-Anbiya
College/Institute: Administration and Economics
Scientific Department: Oil and Gas Economics
Date of filling the file: 19/9/2024**

**Signature:
Name of Head of Academic
Department:
:Date**

**Signature:
Name of Scientific
Assistant:
Date:**

**Subject teacher: M.M. Abdulrahman ali
File reviewed by: Quality Assurance and
University Performance Division
Name of Director of Quality Assurance and
University Performance Division:**

Date: 19/9/2024

Signature:

Dean's approval

Course Description Form

Course Description

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the programme description.

1. Educational institution	Faculty of Administration and Economics / University of Warith Al-Anbiya
2. Scientific Department / Center	Oil and Gas Economics
3. Course Name/Code	Economic Mathematics
4. Available forms of attendance	Live attendance in the classroom
5. Semester/Year	Academic year: 2024/2025
6. Number of study hours (total)	90 hours theoretical
7. Date this description was prepared	19/9/2024

8. Course Objectives

A - Teaching the student and giving him experience to recognize the concept of economic mathematics

B- Learn how to determine the optimal production volume.

C- Learn how to find implicit and partial derivatives.

D- Learn how to determine consumption that maximizes consumer satisfaction.

E- Learn how to find the total differential

9. Course outcomes, teaching, learning and assessment methods

A- Cognitive objectives

- Knowledge and understanding of economic mathematics.
- Understanding the importance of economic mathematics in project work.

B - Course specific skill objectives.

- Learn how to apply economic mathematics in project work.
 - Developing the ability to analyze consumer problems in order to maximize consumer satisfaction
 - Organizing the work of projects by knowing the optimal production volume for these projects
- *These skills help economic mathematicians provide advice for projects to do well

C- Application skills

Learn how to apply mathematical equations in economic projects in order for them to work well

D- Evaluation methods

- 1- Written tests (2 monthly exams) (30 marks)
- 2- Oral and paper tests (daily exams) (10 marks)
- 3- Attendance, participation and assignments (10 marks)

E - teaching and learning methods

In-person lectures, group discussions and on-screen demonstrations.

10. Course Structure

The week	Watches	Required learning outcomes	Unit name/ topic	Teaching method	Evaluation method
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	Derivative rules	The topic of derivatives and their rules	a lecture	daily
4	3	First-order optimization	Variable optimization of revenue, cost and profit functions	a lecture	daily
5	3	Bivariate optimization	Unconstrained bivariate optimization	a lecture	daily
6	3	Daily exam	Daily exam	exam	Exam
7	3	Constrained optimization	Solve the constrained optimization using the Langrage method	a lecture	Daily
8	3	First month exam	First month exam	Exam	Exam
9	3	Consumer equilibrium	Determining optimal satisfaction through consumption of two goods	a lecture	Daily
10	3	Implicit function	Implicit function	a lecture	Daily
11	3	Total differentiation	Total differentiation	a lecture	Daily
12	3	Shadow prices	Shadow prices	a lecture	Daily
13	3	Value functions	Value functions	a lecture	Daily
14	3	Comparative statistics	Comparative statistics	a lecture	daily
15	3	Second month exam	Second month exam	exam	exam

11. Course Infrastructure

1- Required textbooks	There is no prescribed book.
2- Main references (sources)	
A- Recommended books and references (scientific journals, reports, etc).	-Book (Human Resources Management, Al-Salem, Mu'ayyad Saeed, Saleh, Adel Harhoush)
B - Electronic references, websites...	

12. Curriculum Development Plan

- 1- Continuously updating the curriculum resources in order to keep pace with developments and changes according to an ideal educational environment that seeks to reach a high educational level.
- 2- Working on adding a paragraph (case study) for each paragraph of the curriculum to bring the concept of the theoretical aspect closer.

M.M. Abdulrahman ali
Economic Mathematics
Warith Al-Anbiya University
College of Management and Economics /
Department of Oil and Gas Economics
2025/2024