Academic Program Description Form for Colleges and Institutes

University: of Warith Al.anbiyaa

Faculty/Institute: Management and Economics

Scientific Department: Business Management

File Filling Date: 1/3/ 2025

Signature:

Head of Department Name:

Date:

Signature:

Scientific assistant Name:

Date:

Check the file before

Division of Quality Assurance and University Performance

Name of the Director of the Quality Assurance and University Performance Division:

Date:

Signature:

Ratification of the Dean

Course Description Form

Course Description **The course is taught in Arabic**

This course provides students with essential mathematical concepts and techniques used in business decision-making. Topics include financial mathematics, statistical analysis, optimization, and business forecasting. Emphasis is placed on real-world applications in management, finance, and economics. Students will develop analytical skills to solve business problems and make data-driven decisions.

Educational institution	University of Warith Al-Anbiyaa
Scientific Department / Center	Business Adminstration
Course Name	Mathematics for Business Management
Available Attendance Forms	Face-to-face attendance in the classroom
Semester / Year	Academic Year: 2024-2025
Number of Credit Hours (Total)	75 hours theoretical and practical
The history of preparation of this description	1/ 3 / 2025

Course Objectives:

- Develop a strong foundation in mathematical concepts relevant to business and management.
- Apply mathematical models to solve business and economic problems.
- Analyze statistical data to support business strategies and market research.
- ☐ Enhance problem-solving and critical thinking skills through business case studies.

9. A. Course Outcomes and Methods of Teaching, Learning and Assessment
• Understand and apply mathematical principles in business scenarios.
• Utilize statistical tools to analyze business performance and make predictions.
• Interpret quantitative data and communicate findings effectively.
• Apply mathematical reasoning to decision-making in management and marketing.

B - Skills objectives of the course.
- Analytical Thinking – Develop problem-solving techniques for business applications.
- Data Interpretation – Strengthen ability to analyze and visualize business data.
- Quantitative Reasoning – Enhance numerical proficiency for financial decision-making.
- Technology Integration – Utilize software tools for business mathematics.

C. Thinking skills

Developing thinking skills through analysis, inference, and problem-solving. Critical thinking is stimulated through classroom discussions and interactive questioning. Creative thinking skills are enhanced by applying concepts to practical examples and case studies.

D. Evaluation methods

The course depends on written exams, assignments, and class participation. Understanding is assessed through quizzes and final exams, while projects and presentations reflect practical application skills. Interaction and classroom discussions contribute to continuous assessment.

Teaching and learning methods

Direct interaction between the instructor and students. Content is delivered through verbal explanations, presentations, and classroom discussions. Visual aids such as whiteboards and projectors enhance understanding. Students are encouraged to ask questions and participate in discussions to reinforce comprehension.

References
الرياضيات الادارة الاعمال – سلسلة شوم

10. Infrastructure: Classroom, data show or smart board.	
Topics by week	Learning outcomes by weeks
1. Rules of Derivatives 2. Functions and Their Graphs 3. Differentiation 4. Application of Functions in Management 5. Curve Analysis 6. Exercises 7. Matrices 8. Linear Equations 9. Nonlinear Equations 10. Exam 11. Probability Theory 12. Algebra 13. Constrained Optimization 14. Exercises 15. Set Theory	1. Distinguish between the rules of derivatives and apply them to various mathematical problems. 2. Graph functions and interpret their geometric properties. 3. Use differentiation rules to solve mathematical problems and analyze changes. 4. Apply functions to solve managerial problems and make decisions. 5. Analyze curves and interpret their behavior using mathematical tools. 6. Solve practical exercises to reinforce the understanding of previous concepts. 7. Explain the concept of matrices and apply basic matrix operations. 8. Solve linear equations using algebraic methods and matrices. 9. Differentiate between linear and nonlinear equations and use appropriate methods to solve them. 10. Successfully pass the exam by utilizing the learned mathematical concepts. 11. Interpret probability theory and apply it to real-world scenarios. 12. Use algebra to solve equations and

	mathematical expressions.
	13.Apply constrained optimization concepts to find optimal solutions to problems.
	14.Enhance understanding by solving various exercises covering course topics.
	15.Explain set theory and apply it in mathematical modeling.

Hours: Three hours per week
Teaching method: Live lecture, case studies
Evaluation method: Daily tests.

11.Course Development Plan
Expanding the the curriculum by adding the following topics: • Applications of exponential functions in calculating compound interest • Interpreting graphs in administrative and economic applications