

University of Jordan
Jordan University Business School (JUBS)

Course Syllabus

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|--|---|-----------------------------|--------|------------------------|------------------------|--|
| 1. Department Name: | Business Economics | | | | | |
| 2. Program Name: | Bachelor Degree | | | | | |
| 3. Program Code | 07 | | | | | |
| 4. Course Code and Title: | 1607115 | Intro Mathematical Economic | | | | |
| 5. Course credits: | 3 hours | | | | | |
| 6. Pre-requisites: | | | | | | |
| 7. Course Instructor/ Coordinator Name and Email | <i>Alaaeddin Al-Tarawneh</i> <i>a.altarawneh@ju.edu.jo</i> | | | | | |
| 8. Course web-page: | | | | | | |
| 9. Academic year: | | | | | | |
| 10. Semester: | First | X | Second | 1 st Summer | 2 nd Summer | |
| 11. Textbook(s) (Make sure you have one textbook – resource materials online) <i>Ian Jacques, Mathematics for Economics and Business, 4th edition, Pearson Education, 2003</i> | | | | | | |
| 12. References: (Make sure that the references are available in the Library and online) | | | | | | |
| 13. Other resources used (e.g. periodicals, software, eLearning, site visits, etc.): | | | | | | |
| 14. Course description (from the catalog) <i>This course aims to acquaint students with the nature of economic models, mathematics, mathematical analysis tools necessary to analyze behavioral equilibrium by linear models, matrices, determinants, and the equilibrium by comparative behavioral derivatives. The course also aims to acquaint students with issues of optimization, sequences, differentiation and integration. The course also includes concepts and ways of calculating simple and compound interests.</i> | | | | | | |

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| 15. Course Intended Learning Outcomes: (All CILOs must start with an action verb, please use ANNEX I for getting a better understanding of the Action Verbs and Blooms Taxonomy. The mapping of the CILOs with relevance to the PILOs of the program.) | | | | | | | | | | | |
| | <i>Mapping to PILOs</i> | | | | | | | | | | |
| CILOs (Preferred not to exceed 12 CILOs) | a | b | c | d | e | f | g | h | i | J | k |
| 1. acquire basic knowledge in basic mathematical techniques | X | | | | | | | | | | |
| 2. acquire knowledge and apply techniques in financial mathematics | X | | | | | | | | | | |

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| 3. <i>identify and apply the relevant quantitative techniques in solving economic and business problems</i> | X | | | | | | | | | | |
| 4. <i>be able to use mathematical analysis to solve problems, interpret results, and verify conclusions</i> | | X | | | | | | | | | |
| 5. <i>be able to determine the reasonableness of solutions, including sign, size, relative accuracy, and units of measurement</i> | | X | | | | | | | | | |
| 6. <i>be able to model a written description of a simple economic or physical situation with a function, differential equation, or an integral</i> | | X | | | | | | | | | |
| 7. | | | | | | | | | | | |
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| 12. | | | | | | | | | | | |

16. Course evaluation: (Formative and summative assessment methods are expected)

| Assessment Type | Details/ Explanation of Assessment in relation to CILOs | Number | Weight | Date(s) |
|------------------------|--|---------------|---------------|----------------|
| Quizzes | A&B | 2 | 20 % | |
| Midterms | A&B | 1 | 30 % | |
| Assignments | | | % | |

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|------------------------------|-----|----------|------|--|
| Projects/Case Studies | | | % | |
| Final | A&B | 1 | 50 % | |
| Total | | | 100% | |

17. Description of Topics Covered (The description should be from the textbook used)

| Topic Title (e.g. chapter title) | Description |
|---|---|
| Basic mathematics | Linear, Quadratic, and Simultaneous equations and applications |
| Differentiation and applications | Definition of the derivative, Rules for differentiation, and Optimization for functions of one variable |
| Integration and applications | Rules for integration |
| Functions of several variables | Partial differentiation, Unconstrained optimization, and Lagrange multipliers |

18. Course Weekly Breakdown:

| Week | Date | Topics covered | CILOs | Teaching Method | Assessment |
|-------------|-------------|-----------------------|--------------|------------------------|-------------------|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
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| 12 | | | | | |

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| 19. <u>Others:</u> | |
| | Description |
| Attendance policies: | Students are not allowed to miss more than 15% of the classes during the semester. Failing to meet this requirement will be dealt with according to the university disciplinary rules. |
| Absences from exams and handing in assignments on time: | |
| Health and safety procedures: | |
| Honesty policy regarding cheating, plagiarism, misbehavior: | |

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|--|-------------------------------|--------------------|
| Course Coordinator: | Type the Name | Add your Signature |
| Head of Department: | Type the Name | Add your Signature |
| Head of curriculum committee/ School Level: | Type the Name | Add your Signature |
| Dean: | Type the Name | Add your Signature |
| Approved by the Program Coordinator/ Head of the Department on: | Type the date: DAY/MONTH/YEAR | |

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| <u>Copy to:</u> |
| <input type="checkbox"/> Head of Department |
| <input type="checkbox"/> Assistant dean for Development and Quality Assurance |
| <input type="checkbox"/> Course Portfolio |