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| Hashemite University |   | Principle of Mathematics (110108102) 3 Credit Hours |
| Faculty of Science | | Pre-requisite: ... |
| Department of Mathematics | | Second Semester 2013/2014 |

Course Syllabus

| Course Information | |
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| Lecture's Time | |
| Lecture Room | |
| Instructor | Abdallah Shihadeh |
| Office Location | IT224 |
| Office Hours | 9-10 Sun,Tue,Thu////11-12 Mon,Wed |
| Text Book : Mathematics for Economics and Business, Ian Jacques, Pearson Education Limited, 5 th edition, 2006. | |
| References(s) | Calculus for management, social and life sciences, D. Barkey, Saunders College Publishing 2 nd edition, 1990. |

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|--|----------------------|-----|----------------------|-----|-------|----|------------|-----|--|
| <p>Grading Policy:</p> <table> <tr> <td>1st Exam</td> <td>25%</td> </tr> <tr> <td>2nd Exam</td> <td>25%</td> </tr> <tr> <td>Other</td> <td>0%</td> </tr> <tr> <td>Final Exam</td> <td>50%</td> </tr> </table> | 1 st Exam | 25% | 2 nd Exam | 25% | Other | 0% | Final Exam | 50% | <p>Participation and Exams:</p> <p>Attendance is absolutely mandatory. Students who miss the class sessions without a compelling excuse will qualify the student to be dismissal. Students who miss a lab without a compelling excuse will lose participation points.</p> |
| 1 st Exam | 25% | | | | | | | | |
| 2 nd Exam | 25% | | | | | | | | |
| Other | 0% | | | | | | | | |
| Final Exam | 50% | | | | | | | | |

| Course Objectives |
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| <p>To introduce the necessary mathematical concepts and techniques for the students of economics and business to enable them to face and solve problems in the future studies that need mathematics.</p> |

Teaching and Learning Methods

- Introducing new definitions and using examples to illustrate new concepts.
- Giving examples and applications for some theorems and corollaries.
- Giving a sample assignment for each section.
- Discussing some of the students' solutions of some sample assignments.
- Making a discussion of the problems of each exam.

Course Contents

| Week | Section in Text | Topics |
|------|-----------------|---|
| 1 | 1.1 | Graphs of linear equations |
| | 1.2 | Algebraic solution of simultaneous linear equations |
| 2 | 1.3 | Supply and demand analysis |
| | 1.4 | Algebra |
| 3 | 1.5 | Transposition of formulae |
| | 1.6 | National income determination |
| 4 | 2.1 | Quadratic functions |
| | 2.2 | Revenue, cost and profit |
| 5 | 2.3 | Indices and logarithms |
| | 2.4 | The exponential and natural logarithm functions |
| 6 | 3.1 | Percentages |
| | 3.2 | Compound interest |
| 7 | 3.3 | Geometric series |
| | 4.1 | The derivative of a function |
| 8 | 4.2 | Rules of differentiation |
| | 4.3 | Marginal functions |
| 9 | 4.4 | Further rules of differentiation |
| | 4.6 | Optimization of economic functions |
| 10 | 4.7 | Further optimization of economic functions |
| | 4.8 | The derivative of the exponential and natural logarithm functions |
| 11 | 5.1 | Functions of several variables |
| 12 | 6.1 | Indefinite integration |
| | 6.2 | Definite integration |
| 13 | 7.1 | Basic matrix operations |
| 14 | 7.2 | Matrix inversion |
| 15 | 7.3 | Cramer's rule |