

Course Title	Quantitative Methods and Techniques				
Course Code	MIS 400				
Course Type	Compulsory				
Level	Undergraduate				
Year / Semester	Year 4 / Semester 7				
Teacher's Name	CHRIS CHARALAMBOUS/JOSEPH ANTOINE AL ASMAR/CONSTANTIN ZOPOUNIDES				
ECTS	6	Lectures / week	3	Laboratories / week	
Course Purpose and Objectives	<p>This course provides an introduction to the mathematical and statistical tools required in a business degree. There is an emphasis on problem solving by both manual and computer methods. The first half of the course focuses on algebra and graphs, financial mathematics and optimization methods including linear programming and calculus. The second half of the course focuses on developing quantitative data analysis skills through probability, descriptive statistics, inferential statistics and linear regression (simple and multiple regression using cross sectional data).</p>				
Learning Outcomes	<p>On completion of this course, the students will be able to:</p> <ul style="list-style-type: none"> • Understand various quantitative & statistical methods • Understand data and draw inference from data • Calculate and interpret statistical values by using statistical tool (correlation & regression) • Demonstrate an ability to apply various statistical tool to solve business problem 				
Prerequisites		Required	MIS 101; MAT 202		
Course Content	<p>PART I: MATHEMATICAL APPLICATIONS.</p> <ol style="list-style-type: none"> 1. Revision Mathematics.- 2. Keeping up with Change: Index Numbers.- <p>PART II: COLLECTING AND INTERPRETING DATA.-</p> <ol style="list-style-type: none"> 3. Collecting Data: Surveys and Samples.- 4. Finding Patterns in Data: Charts and Tables.- 5. Making Sense of Data: Averages and Measures of Spread.- 				

	<p>PART III: PROBABILITY & STATISTICS.-</p> <p>6. Taking a Chance: Probability.-</p> <p>7. The Shape of Data: Probability Distributions.-</p> <p>8. Interpreting with Confidence: Analysis of Sample Data.-</p> <p>9. Checking Ideas: Testing a Hypothesis.-</p> <p>10. Cause and Effect: Correlation and Regression.-</p> <p>PART IV: DECISION MAKING TECHNIQUES.-</p> <p>11. How to make Good Decisions.-</p> <p>12. Choosing wisely: Investment Appraisal.-</p> <p>13. Forecasting: Time Series Analysis.-</p> <p>14. Making the Most of Things: Linear Programming.-</p> <p>15. Planning Large Projects: Network Analysis.</p>								
Teaching Methodology	<ul style="list-style-type: none"> •Reading and resolving problems •Working on problem-solving •Attendance and participation in class •Monitor discussions •Writing and reply on objective type questions •Solving unstructured questions and case studies •Brief oral presentation before starting a new chapter and reply to queries from students •Homework for revision purposes •Interaction and collaborative learning •Simulation •Video Watching 								
Bibliography	<p>1- Quantitative Analysis for Decision Makers, 7th Edition (Formally known as Quantitative Methods for Decision Makers), 7th Edition</p> <p>Wisniewski & Shafti</p> <p>2020</p> <p>2- Essential Quantitative Methods (7th Edition) For Business, Management and Finance</p> <p>Les Oakshott</p> <p>Publisher:Red Globe Press</p> <p>2019</p>								
Assessment	<table> <tr> <td>Participation</td> <td>10%</td> </tr> <tr> <td>Midterm Exam</td> <td>30%</td> </tr> <tr> <td>Quizzes</td> <td>20%</td> </tr> <tr> <td>Final Exam</td> <td>40%</td> </tr> </table>	Participation	10%	Midterm Exam	30%	Quizzes	20%	Final Exam	40%
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Language	English								