



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Management Mathematics I							
Course Code		İŞLE503		Couse Level		Second Cycle (Master's Degree)			
ECTS Credit	5	Workload	127 (Hours)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		The course prepares students to develop abilities and skills and the accumulation of quantitative decision-making problems in business practice and aims to provide a variety of application areas.							
Course Content		Decision-making in business management, alternatives evaluation, mathematical methods used to determine the most appropriate option to create the infrastructure, analytical thinking skills students will be developed.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Schaum's Outline of Theory and Problems of Mathematical Methods for Business and Economics, DOWLING, Edward. T., McGraw-Hill Professional, 1993.
---	--

Week	Weekly Detailed Course Contents	
1	Theoretical	Science, mathematics and analytical thinking in terms of operational significance, the use of decision-making problems, the basic concepts of mathematics
	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları. TAHA Hamdy A., Yöneylem Araştırması, Literatür Yayınları.
2	Theoretical	Presentation functions, quadratic functions, business applications,
	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları. TAHA Hamdy A., Yöneylem Araştırması, Literatür Yayınları.
3	Theoretical	Plotting of functions, partial functions
	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları. TAHA Hamdy A., Yöneylem Araştırması, Literatür Yayınları.
4	Theoretical	Proportional graphs of functions, absolute value functions
	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları.
5	Theoretical	Exponential and Logarithmic Functions
	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları.
6	Theoretical	Rules of Logarithms, and business applications
	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları.
7	Theoretical	Limit, infinite limits and the uncertainties
	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları.
8	Intermediate Exam	Midterm Exams
9	Theoretical	Graph representation of the concept of continuity and
	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları.



10	Theoretical	Derivation rules, successive differentiation, maximum and minimum points, decreasing and increasing intervals
	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları.
11	Theoretical	Business applications of the derivative
	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları.
12	Theoretical	Profit maximization, cost minimization
	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları. TAHA Hamdy A., Yöneylem Araştırması, Literatür Yayınları.
13	Theoretical	Partial differentiation, Lagrange multiplier
	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları.
14	Theoretical	Optimization methods
	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları. TAHA Hamdy A., Yöneylem Araştırması, Literatür
15	Preparation Work	DOWLING, Edward. T., İşletme Ve İstatistik İçin Matematiksel Yöntemler, Çev. Ö. F. Çolak, M. Yıldırımoglu, Schaum's Outlines, Nobel Yayın Dağıtım. ERTUĞRUL İrfan, Temel Matematik Ekin Yayınları.
16	Final Exam	Final Exam
17	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	3	70
Midterm Examination	1	25	1	26
Final Examination	1	30	1	31
Total Workload (Hours)				127
[Total Workload (Hours) / 25*] = ECTS				5

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Providing support for business decision-making problems,
2	Digital information and skills development,
3	Develop the ability of analytical thinking and development,
4	Research, evaluation, mathematical methods used in basic subjects such as supply,
5	Making use of numerical data and graphs, identify problems and solutions in the areas of the business of finding work.
6	Helping to facilitate researching and computing in areas such as accounting, finance, marketing.

Programme Outcomes (Business Administration Master's Without Thesis)

1	To equip the students from different academic backgrounds with the theoretical and practical information in the fundamental fields of business (i.e. Production management, marketing, accounting and finance, management and organization, and quantitative me
2	Be able to make financial analysis in micro and macro level and develop skills in the analysis of the primary and secondary markets; evaluation of the financial structure of the firms and interpretation of accounting reports and financial statements.
3	Be able to use mathematical, statistical and econometric models in the field of business develop skills for interpreting quantitative data, using data in the decision making process and be able to use statistical forecasting methods
4	To have knowledge about the management techniques, be able to assume responsibility in dealing with unforeseeable and complex problems as an individual and group member and develop leadership and communication skills.
5	Be able to understand principles of marketing, marketing research, market share estimation, market segmentation, market positioning, target markets, marketing mix and the place of marketing department in a business organization, the concept of international

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High



	L1	L2	L3	L4	L5	L6
P1	4	4	5	3	4	3
P2	3	3	4	5	3	3
P3	2	5	3	2	5	3
P4	5	2	2	3	2	2
P5	3	4	5	4	5	4

