



## ECTS COURSE INFORMATION FORM

<b>School/Faculty/Institute</b>	<b>Faculty of Economics, Administrative and Social Sciences</b>		
<b>Program</b>	<b>B.A. in Economics</b>		Required
	<b>B.A. in Business and Administration</b>		Required

<b>Course Code</b>	<b>MATH 203</b>			
<b>Course Title in English</b>	Probability and Statistics for Social Sciences I			
<b>Course Title in Turkish</b>	Sosyal Bilimler için Olasılık ve İstatistik I			
<b>Language of Instruction</b>	English			
<b>Type of Course</b>	Lecture			
<b>Level of Course</b>	Undergraduate			
<b>Semester</b>	Spring			
<b>Contact Hours per Week</b>	Lecture: 2	Recitation:	Lab:1	Other:
<b>Estimated Student Workload</b>	151 hours per semester.			
<b>Number of Credits</b>	6 ECTS			
<b>Grading Mode</b>	Standard Letter Grade			
<b>Pre-requisites</b>	None			
<b>Expected Prior Knowledge</b>	None			
<b>Co-requisites</b>	None			
<b>Registration Restrictions</b>	Only Undergraduate Students			
<b>Overall Educational Objective</b>	To learn the basic concepts of probability and statistics, recognize and distinguish the properties of important distributions and apply probability and statistics concepts in solving real life economic and business problems.			
<b>Course Description</b>	This is the first part of a basic statistics course for economics and business administration majors. The course is application oriented. Some major topics are descriptive statistics, graphical description of data, measures of central tendency, dispersion and shape, probability, discrete and continuous random variables, discrete and continuous probability distributions.			
<b>Course Description in Turkish</b>	Bu ders ekonomi ve işletme öğrencileri için hazırlanmış olan temel istatistik dersinin ilk kısmıdır. Dersin işlenişi uygulama ağırlıklıdır. Bazı ana konular şöyledir: Tanımlayıcı istatistikler, verinin grafiksel tanımı, merkezi eğilim, dağılım ve şekil ölçütleri, kesitli ve sürekli rassal değişkenler, kesitli ve sürekli olasılık dağılımları.			
<b>Course Learning Outcomes and Competences</b>	Upon successful completion of the course, the learner is expected to be able to: <ol style="list-style-type: none"><li>1. solve real life probability problems using basic concepts of probability (counting, combinatorial methods, conditional probability, and Bayes' theorem).</li><li>2. design, analyze and criticize the results of software experiments related with probability computations for standard distributions.</li><li>3. use available resources (the internet or written books) to learn about and use other distributions and probability concepts as they arise.</li></ol>			

4. recognize and distinguish the properties of important discrete probability distributions and solve real life problems using appropriate distributions.
5. explain the use of (and solve problems related with) expectation and variances.
6. recognize and distinguish the properties of important continuous probability distributions and solve real life problems using appropriate distributions.
7. explain the use of (and solve problems related with) expectation and variance.
8. understand the properties of joint probability distributions of multivariate random variables including marginal/conditional distribution/expectation.
9. understand and apply the limit theorems in formulating probability problems and proving results in probability.
10. understand the basic concepts of sampling distributions, estimation and hypothesis testing.
11. use MS Excel to apply statistical concepts learnt during the course.

**Relation to Program Outcomes and Competences: N=None S=Supportive H=Highly Related**

<b>Program Outcomes and Competences</b>	<b>Level</b>	<b>Assessed by</b>
	N/S/H	Exam, Project, HW, Lab, Presentation, etc.
1. Has a broad understanding of economics with a deep exposure to other social sciences and mathematics.	N	
2. Demonstrates knowledge and skills in understanding the interactions of different areas of economics.	N	
3. Displays a sound comprehension of microeconomic and macroeconomic theory.	N	
4. Applies economic concepts to solve complex problems and enhance decision-making capability.	N	
5. Uses quantitative techniques to analyze different economic systems.	N	
6. Applies theoretical knowledge to analyze issues regarding Turkish and global economies.	N	
7. Demonstrates proficiency in statistical tools and mainstream software programs to process and evaluate economic data.	H	Exams, Quizzes, Assignments
8. Behaves according to scientific and ethical values at all stages of economic analysis: data collection, interpretation and dissemination of findings.	S	Exams, Quizzes, Assignments
9. Uses written and spoken English effectively (at least CEFR B2 level) to exchange scientific information.	S	Exams, Quizzes, Assignments
10. Exhibits individual and professional ethical behavior and social responsibility.	S	Exams, Quizzes, Assignments
11. Displays learning skills necessary for further study with a high degree of autonomy	S	Exams, Quizzes, Assignments

<b>Prepared by and Date</b>	<b>Dr. Deniz Nebioğlu Kasapoğlu, 15.01.2019</b>	
<b>Semester</b>	<b>Spring 2018-2019</b>	
<b>Name of Instructor</b>	<b>Dr. Deniz Nebioğlu Kasapoğlu</b>	
<b>Course Contents</b>	Week	Topic
	1.	Syllabus, Introduction
	2.	Data and Statistics
	3.	Descriptive statistics: Tabular and Graphical Displays

	4.	Descriptive statistics: Numerical Measures
	5.	Introduction to probability
	6.	Introduction to probability
	7.	Introduction to probability
	8.	Midterm
	9.	Discrete probability distributions
	10.	Discrete probability distributions
	11.	Continuous probability distributions
	12.	Continuous probability distributions
	13.	Holiday
	14.	Joint, Marginal, Conditional distributions
	15.	Final Examination Period
	16.	Final Examination Period
Required/ Recommended Readings	Essentials of Modern Business Statistics with Office Excel + Mindtap Anderson, Sweeney, Williams ISBN-10: 1-285-86704-1 • ISBN-13: 978-1-285-86704-5 2016 • Cengage Learning • Digital • 667 pages. The e-textbook and supplementary materials will be available via Cengage Mindtap Platform. You can easily print pages from the e-textbook. Mindtap comes with the textbook. The textbook is required for homework questions and quizzes posted online.	
Teaching Methods	Active learning	
Homework and Projects		
Laboratory Work	Each week a one hour lab session is conducted for Excel applications.	
Computer Use	NA	
Other Activities		
Assessment Methods	<p>Course grades are determined on a relative basis (curve). Cumulative total score for the grade is determined by the following weights:</p> <ol style="list-style-type: none"> <li>1. Written midterm exam (25%)</li> <li>2. Written final exam (40%)</li> <li>3. In class quizzes (10%)</li> <li>4. Coursework (pre-lecture quizzes, post-lecture assignments, case studies etc.) (25%)</li> </ol> <p>If you cannot collect <b>at least 30 points</b> from the activities other than the final exam, you can't take the final exam and will get an FZ grade.</p>	
Course Administration	<p><b>Course Instructor:</b> Dr. Deniz Nebioğlu, email: nebioglud@mef.edu.tr  <b>Lecture time and place:</b> Wednesday 14:00-15:50  Lab time and place: Wednesday 16:00-16:50 or Thursday 11:00-11:50  <b>Attendance/participation:</b> Students are expected to prepare for the lecture via assigned videos and reading materials. Students are responsible to follow the announcements, course materials available on Blackboard system.  <b>Formal use of e-mails:</b> Students are expected to use their @mef accounts for email traffic. The instructor is only responsible for the information sent/received through Blackboard system and emails using @mef account. The course instructor assumes that any information sent through email will be received in 24 hours, unless a system problem occurs.  <b>Grading and evaluation:</b> Evaluation will be based on the student learning outcomes. It is strongly recommended to complete all the work in a timely fashion. Late submissions will not be accepted.  <b>Missing midterm exam:</b> Faculty regulations.    <b>Missing final exam:</b> Faculty regulations.    <b>Missing quizzes:</b> No make up</p>	

**Academic integrity:** All students of MEF University are expected to be honest and comply with academic integrity. Students are expected to do their own work and neither give nor receive unauthorized assistance. Disciplinary action will be taken in case of suspicion.

ECTS  
Student  
Workload  
Estimation

Activity	No/Weeks	Hours			Calculation	Explanation
	No/Weeks per Semester (A)	Preparing for the Activity (B)	Spent in the Activity Itself (C)	Completing the Activity Requirements (D)		
Lecture	14	2	2	1	70	A*(B+C+D)
Lab etc.	14	1	1		28	
Midterm(s)	1	15	2		17	A*(B+C+D)
Assingment, Project, Presentation	3	2	1		9	A*(B+C+D)
Final Examination	1	25	2		27	A*(B+C+D)
Total Workload					151	
Total Workload/25					6.04	
ECTS					<b>6</b>	