

TOROS ÜNİVERSİTESİ

Faculty Of Health Sciences

Course Information

STATISTICS

| Code | Semester | Theoretical | Practice | National Credit | ECTS Credit |
|--------|----------|-------------|----------|-----------------|-------------|
| | | Hour / Week | | | |
| SKY203 | Fall | 2 | 2 | 3 | 8 |

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|---|--|
| Prerequisites and co-requisites | None |
| Language of instruction | Turkish |
| Type | Required |
| Level of Course | Bachelor's |
| Lecturer | Assist.Prof.Dr. Ayhan DEMİRCİ |
| Mode of Delivery | Face to Face |
| Suggested Subject | None |
| Professional practise (internship) | None |
| Objectives of the Course | To provide an introduction to some concepts of probability and statistics with applications of health enterprises problems. The course illustrates many examples of common statistical methods for students who would like to focus on descriptive relationships and information intensive fields. |
| Contents of the Course | Permutations, Combinatins, Probability, Discrete and Continuous random variables with their probability distributions and expectations, Samping distributions. |

Learning Outcomes of Course

| # | Learning Outcomes |
|---|---|
| 1 | will be able to define data and summarize the relationship between datas |
| 2 | will be able to create and use graphs for categorical and numerical data, and to describe relationships between variables |
| 3 | will be able to use measures of central tendency, variation, and shape, and use population summary measures |
| 4 | will be able to assess outcomes and events in a probability experiment, apply basic rules of probability |
| 5 | will be able to apply the concept of statistical independence and use Bayes' Theorem |
| 6 | will be able to use mean and standard deviation for discrete and continuous random variables |
| 7 | will be able to use and apply some special probability distributions, and the normal approximation to the binomial distribution |
| 8 | will be able to determine the skewness and curtosis of datas |

Course Syllabus

| # | Subjects | Teaching Methods and Technics |
|---|---|-------------------------------|
| 1 | Basic statistical definitions. What is statistics and statistics? | Lecturing, Discussion |
| 2 | Data analysis. | Lecturing, Discussion |
| 3 | Data summarization methods. Frequency distributions and graphs. | Lecturing, Problem Solving |
| 4 | Data summarization methods. Central tendency measurements. | Lecturing, Problem Solving |
| 5 | Data summarization methods. Central variability measurements. | Lecturing, Problem Solving |
| 6 | Skewness and curtosis. | Lecturing, Problem Solving |
| 7 | Probability theory. | Lecturing, Problem Solving |
| 8 | Mid-Term Exam. | Written exam |

| | | |
|----|--|----------------------------|
| 9 | Discrete probability distributions. Binomial Distribution. | Lecturing, Problem Solving |
| 10 | Discrete probability distributions. Poisson Distribution. | Lecturing, Problem Solving |
| 11 | Discrete probability distributions. Hypergeometric Distribution. | Lecturing, Problem Solving |
| 12 | Normal Distribution. | Lecturing, Problem Solving |
| 13 | Normalization of discrete probability distributions. | Lecturing, Problem Solving |
| 14 | Normalization of discrete probability distributions. | Lecturing, Problem Solving |
| 15 | Normalization of discrete probability distributions. | Lecturing, Problem Solving |
| 16 | Final Exam | Written exam |

Course Syllabus

| # | Material / Resources | Information About Resources | Reference / Recommended Resources |
|---|---|------------------------------------|-----------------------------------|
| 1 | Basic Statistics for Business and Economics | Earl K.Bowen Martin K.Starr | Reference Textbook |
| 2 | Introduction to Statistics | David R.Anderson Dennis J. Sweeney | Suggested Textbook |
| 3 | Elementary Statistics | Allan G.Bluman | Suggested Textbook |

Method of Assessment

| # | Weight | Work Type | Work Title |
|---|--------|---------------|---------------|
| 1 | 40% | Mid-Term Exam | Mid-Term Exam |
| 2 | 60% | Final Exam | Final Exam |

Relationship between Learning Outcomes of Course and Program Outcomes

| # | Learning Outcomes | Program Outcomes | Method of Assessment |
|---|---|------------------|----------------------|
| 1 | will be able to define data and summarize the relationship between datas | 2,5 | 1,2 |
| 2 | will be able to create and use graphs for categorical and numerical data, and to describe relationships between variables | 2,5 | 1,2 |
| 3 | will be able to use measures of central tendency, variation, and shape, and use population summary measures | 2,5 | 1,2 |
| 4 | will be able to assess outcomes and events in a probability experiment, apply basic rules of probability | 2,5 | 1,2 |
| 5 | will be able to apply the concept of statistical independence and use Bayes' Theorem | 2,5 | 1,2 |
| 6 | will be able to use mean and standard deviation for discrete and continuous random variables | 2,5 | 1,2 |
| 7 | will be able to use and apply some special probability distributions, and the normal approximation to the binomial distribution | 2,5 | 1,2 |
| 8 | will be able to determine the skewness and curtosis of datas | 2,5 | 1,2 |

PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method of Assessment.

Work Load Details

| # | Type of Work | Quantity | Time (Hour) | Work Load |
|---|---|----------|-------------|-----------|
| 1 | Course Duration | 14 | 4 | 56 |
| 2 | Course Duration Except Class (Preliminary Study, Enhancement) | 14 | 2 | 28 |
| 3 | Presentation and Seminar Preparation | 0 | 0 | 0 |
| 4 | Web Research, Library and Archival Work | 0 | 0 | 0 |
| 5 | Document/Information Listing | 0 | 0 | 0 |
| 6 | Workshop | 0 | 0 | 0 |

| | | | | |
|----|------------------------------|---|----|------------|
| 7 | Preparation for Midterm Exam | 1 | 28 | 28 |
| 8 | Midterm Exam | 1 | 2 | 2 |
| 9 | Quiz | 0 | 0 | 0 |
| 10 | Homework | 2 | 8 | 16 |
| 11 | Midterm Project | 0 | 0 | 0 |
| 12 | Midterm Exercise | 0 | 0 | 0 |
| 13 | Final Project | 0 | 0 | 0 |
| 14 | Final Exercise | 0 | 0 | 0 |
| 15 | Preparation for Final Exam | 1 | 27 | 27 |
| 16 | Final Exam | 1 | 3 | 3 |
| | | | | 160 |