TOROS ÜNİVERSİTESİ

Faculty Of Economic, Administrative And Social Sciences International Finance (English)

Course Information

| MATHEMATICS II | | | | | | |
|----------------|----------|-------------|----------|-----------------|-------------|--|
| Code | Semester | Theoretical | Practice | National Credit | ECTS Credit | |
| | | Hour / Week | 2 | | | |
| MAT104 | Spring | 3 | 0 | 3 | | |

| Prerequisites and co- requisites | |
|---|---|
| Language of instruction | English |
| Туре | Required |
| Level of Course | Bachelor's |
| Lecturer | Prof. Dr. Adnan Mazmanoğlu |
| Mode of Delivery | Face to Face |
| Suggested Subject | |
| Professional practise (internship) | None |
| Objectives of the Course | The aim of the course is to provide students with basic concepts of probability and to build the basis for the insurance and risk management classes. |
| Contents of the Course | |

Learning Outcomes of Course

| # | Learning Outcomes |
|---|--|
| 1 | Understand probability concepts and definitions. |
| 2 | Learn probability distributions and their differences |
| 3 | Understand conditional probability and the indepence of two events |
| 4 | Learn statistical distributions used in the insurance industry. |

Course Syllabus

| # | Subjects | Teaching Methods and Technics |
|----|--|--------------------------------------|
| 1 | Definitions of probability concepts | |
| 2 | Introduction to probability -1 | |
| 3 | Introduction to probability -2 | |
| 4 | Conditional probability | |
| 5 | Independence of two events, random variables and distributions | |
| 6 | Discrete random variables and distributions | |
| 7 | Discrete random variables and distributions | |
| 8 | Midterm | |
| 9 | Continuous random variables and distributions | |
| 10 | Continuous random variables and distributions | |
| 11 | Continuous random variables and distributions | |
| 12 | Integration under curve | |
| 13 | Integration under curve | |

| 14 | Expected value and moments | |
|----|----------------------------|--|
| 15 | Conclusion and Wrap up | |
| 16 | Final Exam | |

Course Syllabus

| # | Material / Resources | Information About Resources | Reference / Recommended Resources |
|---|---|--------------------------------|--------------------------------------|
| 1 | Ross, S. M. A first course in probability, 9th edition, Pearson, 2012 | | |

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 | Understand probability concepts and definitions. | | |
| 2 | Learn probability distributions and their differences | | |
| 3 | Understand conditional probability and the indepence of two events | 5 | |
| 4 | Learn statistical distributions used in the insurance industry. | | |

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 | 3 | 42 |
| 2 | Course Duration Except Class (Preliminary Study, Enhancement) | 14 | 3 | 42 |
| 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 | 14 | 14 |
| 8 | Midterm Exam | 1 | 3 | 3 |
| 9 | Quiz | 0 | 0 | 0 |
| 10 | Homework | 2 | 9 | 18 |
| 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 | 4 | 4 |
| | | | | 150 |