

TOROS ÜNİVERSİTESİ

Institute Of Graduate Education
Civil Engineering Master's Program (With Thesis)

Course Information

| ADVANCED HYDROLOGY | | | | | |
|--------------------|----------|-------------|----------|-----------------|-------------|
| Code | Semester | Theoretical | Practice | National Credit | ECTS Credit |
| | | Hour / Week | | | |
| FIM630 | Spring | 3 | 0 | 3 | 7 |

| | |
|---|--|
| Prerequisites and co-requisites | NONE |
| Language of instruction | Turkish |
| Type | Elective |
| Level of Course | Master's |
| Lecturer | PROF.DR. AZİZ ERTUNÇ |
| Mode of Delivery | Face to Face |
| Suggested Subject | NONE |
| Professional practise (internship) | None |
| Objectives of the Course | The definition of the hydrological cycle and its elements, the definition and content of hydrology, examination of hydrological elements |
| Contents of the Course | Hydrological circle, rainfall, infiltration, evaporation, runoff, groundwater, hydrograph analysis |

Learning Outcomes of Course

| # | Learning Outcomes |
|---|--|
| 1 | General awareness about hydrological cycle |
| 2 | Learning the criteria of data evaluation in hydrology |
| 3 | Comprehending the importance of hydrological output by designing water constructions |
| 4 | Describing basic notions of floods |

Course Syllabus

| # | Subjects | Teaching Methods and Technics |
|----|---|-------------------------------|
| 1 | Introduction, Hydrological Cycle | Lecture |
| 2 | Rainfall | Lecture |
| 3 | Applications for Rainfall | Lecture |
| 4 | Evaporation and Infiltration | Lecture |
| 5 | Applications for Evaporation and Infiltration | Lecture |
| 6 | Groundwater | Lecture |
| 7 | Applications for Groundwater | Lecture |
| 8 | Runoff and Analysis of Runoff data | Lecture |
| 9 | Application for Runoff | Lecture |
| 10 | Mid-Term Exam | |
| 11 | Hydrograph analysis | Lecture |
| 12 | Application for Hydrograph analysis | Lecture |
| 13 | Statistical Methods in Hydrology | Lecture |

| | | |
|----|-------------------------------------|---------|
| 14 | Application for Statistical Methods | Lecture |
| 15 | Application for Statistical Methods | Lecture |
| 16 | Final Exam | |

Course Syllabus

| # | Material / Resources | Information About Resources | Reference / Recommended Resources |
|---|---|-----------------------------|-----------------------------------|
| 1 | Hidroloji Mehmetçik Bayazıt Birsen Yayınevi | | |
| 2 | Hidroloji Uygulamaları Mehmetçik Bayazıt, İlhan Avcı, Zekai Şen Birsen Yayınevi | | |

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 | General awareness about hydrological cycle | 2 | 1 |
| 2 | Learning the criteria of data evaluation in hydrology | 1 | 2 |
| 3 | Comprehending the importance of hydrological output by designing water constructions | 2 | 1 |
| 4 | Describing basic notions of floods | 2 | 1 |

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 | 4 | 56 |
| 3 | Presentation and Seminar Preparation | 3 | 5 | 15 |
| 4 | Web Research, Library and Archival Work | 3 | 5 | 15 |
| 5 | Document/Information Listing | 0 | 0 | 0 |
| 6 | Workshop | 0 | 0 | 0 |
| 7 | Preparation for Midterm Exam | 3 | 5 | 15 |
| 8 | Midterm Exam | 3 | 3 | 9 |
| 9 | Quiz | 0 | 0 | 0 |
| 10 | Homework | 0 | 0 | 0 |
| 11 | Midterm Project | 0 | 0 | 0 |
| 12 | Midterm Exercise | 0 | 0 | 0 |
| 13 | Final Project | 3 | 3 | 9 |
| 14 | Final Exercise | 1 | 1 | 1 |
| 15 | Preparation for Final Exam | 3 | 3 | 9 |
| 16 | Final Exam | 3 | 3 | 9 |
| | | | | 180 |

