# TOROS ÜNİVERSİTESİ

Faculty Of Engıneerıng
Computer And Software Engıneerıng

## Course Information

| INTRODUCTION TO COMPUTER ENGINEERING | | | | | |
|---|---|---|---|---|---|
| **Code** | **Semester** | **Theoretical** | **Practice** | **National Credit** | **ECTS Credit** |
| | | **Hour / Week** | | | |
| CSE111 | Fall | 3 | 0 | 3 | |

| | |
|---|---|
| **Prerequisites and co-requisites** | None |
| **Language of instruction** | English |
| **Type** | Required |
| **Level of Course** | Bachelor's |
| **Lecturer** | Asst. Prof. Mehmet Ali AKTAŞ |
| **Mode of Delivery** | Face to Face |
| **Suggested Subject** | None |
| **Professional practise ( internship )** | None |
| **Objectives of the Course** | This course intends to review the fundamental subjects and interests of computer engineering |
| **Contents of the Course** | 1. Fundamental Concepts of Computer Sciences 2. Software and Hardware Concepts 3. Number Bases, Conversion, Signed Numbers, Signed Numbers Arithmetic 4. Introduction to Programming Languages 5. Algorithm Concept 6. Pseudo Code, Flow Chart 7. Introduction to simple data types and operators: integer, float, character, addition, subtraction, multiplication, division 8. Input/Output 9. Conditionals and loops 10. Arrays, Multidimensional Arrays 11. Search Algorithms 12. Sıralama Algoritmaları |

## Learning Outcomes of Course

| # | Learning Outcomes |
|---|---|
| 1 | Students will define fundamental underlying principles concepts of computer engineering. |
| 2 | Students will understand how to design correct and efficient algorithms. |
| 3 | Students will learn about the process of writing and debugging a program. |
| 4 | Students will learn how to describe the devised algorithms as flowcharts. |
| 5 | Students will be able to know different branches of computer engineering. |

## Course Syllabus

| # | Subjects | Teaching Methods and Technics |
|---|---|---|
| 1 | Fundamental Concepts of Computer Sciences and Engineering | Lecture, discussion, presentation |
| 2 | Software and Hardware Concepts | Lecture, discussion, presentation |
| 3 | Number Bases, Conversion, Signed Numbers, Signed Numbers Arithmetic | Lecture, discussion, presentation |
| 4 | Introduction to Programming Languages | Lecture, discussion, presentation |
| 5 | Algorithm Concept | Lecture, discussion, presentation |
| 6 | Pseudo Code, Flow Charts | Lecture, discussion, presentation |
| 7 | 1st Midterm Exam | Exam |
| 8 | Conditionals | Lecture, discussion, presentation |
| 9 | Loops | Lecture, discussion, presentation |
| 10 | More on Loops | Lecture, discussion, presentation |

| 11 | Arrays, Multidimensional Arrays | Lecture, discussion, presentation |
|----|---------------------------------|-----------------------------------|
| 12 | Search Algorithms | Lecture, discussion, presentation |
| 13 | Sorting Algorithms | Lecture, discussion, presentation |
| 14 | Final exam | Exam |
| 15 | | |
| 16 | | |

## Course Syllabus

| # | Material / Resources | Information About Resources | Reference / Recommended Resources |
|---|----------------------|-----------------------------|------------------------------------|
| 1 | | | |

## 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 | Students will define fundamental underlying principles concepts of computer engineering. | 4,11 | 1,2 |
| 2 | Students will understand how to design correct and efficient algorithms. | 4,11 | 1,2 |
| 3 | Students will learn about the process of writing and debugging a program. | 4,11 | 1,2 |
| 4 | Students will learn how to describe the devised algorithms as flowcharts. | 4,11 | 1,2 |
| 5 | Students will be able to know different branches of computer engineering. | 4,11 | 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 | 3 | 42 |
| 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 | 2 | 2 |
| 8 | Midterm Exam | 1 | 1 | 1 |
| 9 | Quiz | 0 | 0 | 0 |
| 10 | Homework | 1 | 10 | 10 |
| 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 | 15 | 15 |

| 16 | Final Exam | | 1 | 2 | 2 |
|----|------------|--|---|---|---|
| | | | | | **100** |