Course Information

Course Code	5670441
Course Section	1
Course Title	DATA STRUCTURES
Course Credit	3
Course ECTS	5.0
Course Catalog Description	Arrays, stacks, queues, linked lists, trees, hash tables, graphs: Algorithms and efficiency of access. Searching and sorting algorithms.
Prerequisites	Students must complete one of the following sets to take this course.

Set	Prerequisites
1	5710230

Schedule	Tuesday , 09:40 - 11:30, EA206 Thursday , 09:40 - 10:30, EA206

Instructor Information

Name/Title	Prof.Dr. ŞENAN ECE SCHMİDT
Office Address	A-402
Email	eguran@metu.edu.tr
Personal Website	http://users.metu.edu.tr/eguran/
Office Phone	210 4405
Office Hours	None

Course Objectives

This course primarily aims to acquaint the student with basic data structures frequently used in software engineering and programming practices. Concepts of object-oriented programming, abstract data types, dynamic memory management and algorithm complexity are given. Searching and sorting algorithms are also discussed.

Tentative Weekly Outline

Week	Topic	Relevant Reading	Assignments
1	Object-Oriented Programming, Classes		
2	Argument passing, references		
3	Pointers, arrays		
4	Algoritmic Complexity		
5	Stacks and Queues		
6	Dynamic memory		
7	Linked lists		
8	Trees		

Week	Topic	Relevant Reading	Assignments
9	Graphs		
10	Sorting		
11	Hashing		
12	Computational Complexity		

Course Textbook(s)

Reference books:

(1) Preiss, B.R., Data Structures and Algorithms with Object-Oriented Design Patterns in C++, Wiley, 1999;

(2) Ford&Topp, Data Structures with C++, Prentice-Hall, 1999;

(3) Shaffer, C., Data Structures & Algorithm Analysis in C++, Dover Publications, 2012 (http://www.e-booksdirectory.com/details.php?ebook=7307).

Course Material(s) and Reading(s)

Material(s)

Lecture notes on odtuclass.

Reading(s)

Lecture notes on odtuclass.

Assessment of Student Learning

Assessment	Dates or deadlines
Midterm Exam	
Quizes	
Final Exam	
Programming Assignment I	
Programming assignment II	
Programming assignment III	

Course Grading

Deliverable	Grade Points
Midterm Exam	30
Final Exam	40

Deliverable	Grade Points
Programming Assigments, Quizes, Attendance	30
Total	100

Course Policies

Class Attendance

Class attendance is graded

Late Submission of Assignments

Late submissions of assignments will be penalized according to the following policy:

- 1 day late submission: HW will be evaluated out of 70.
- 2 days late submission: HW will be evaluated out of 50.
- 3 days late submission: HW will be evaluated out of 30.
- 4 or more days late submission: HW will not be evaluated.

It is **NOT** allowed to prapare homeworks as groups. METU honor code is essential.

To **COPY** or **BEING COPIED** will result in grade **ZERO**.

Make up for Exams and Assignments

Make-ups are to be given to those having medical report approved by METU medical center.

Final Exam Entrance Conditions

Students who miss all the exams, or who do not submit any HW will be graded as NA.

Other

It is not allowed:

- to use calculators, cell phones or other electronic devices

- going outside

during exams.

Information for Students with Disabilities

To obtain disability related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the ODTÜ Disability Support Office as soon as possible. If you need any accommodation for this course because of your disabling condition, please contact me. For detailed information, please visit the website of Disability Support Office: http://engelsiz.metu.edu.tr/

Academic Honesty

The METU Honour Code is as follows: *"Every member of METU community adopts the following honour code as one of the core principles of academic life and strives to develop an academic environment where continuous adherence to this code is promoted. The members of the METU community are reliable, responsible and honourable people who embrace only the success and recognition they deserve, and act with integrity in their use, evaluation and presentation of facts, data and documents."*