ABDULLAH GUL UNIVERSITY DEPARTMENT OF COMPUTER ENGINEERING
COMP 203 DATA STRUCTURES AND ALGORITHMS

Course Description	The purpose of this course is to provide introduction to data structures and algorithms. The topics include fundamental data structures, algorithm analysis, recursion, stacks, queues, list and iterator ADTs, and trees.
Course Objectives	Students will be able to • Gain an understanding of the software concepts that will be used to implement data structures • Learn major data structures • Learn fundamentals of algorithm analysis • Learn algorithm design patterns to solve computational problems
Learning Outcomes	The students who finish this course will be able to • Describe fundamental data structures and algorithm • Analyze an algorithm for a computational problem • Develop efficient computer programs using appropriate data structures and algorithms in Java • Solve computational problems by applying the data structure and algorithm design concepts
Course Prerequisites	COMP 112 Object Oriented Programming
Textbooks	*Data Structures and Algorithms in Java*, 6th edition, M. T. Goodrich, R. Tamassia, M. H. Goldwasser, Wiley, 2014.
Other References	• *Java How to Program, Early Objects., P. Deitel and H. Deitel, 11th Edition, Prentice Hall, 2017.* • *Core Java, vol. I–Fundamentals*, 12th edition, C. S. Horstmann and G. Cornell, Upper Saddle River, NJ: Prentice Hall, 2021. • *The Java Programming Language*, 4th edition, K. Arnold, J. Gosling, and D. Holmes, The Java Series, Upper Saddle River, NJ: Prentice Hall, 2005. • Eclipse and Java for Total Beginners http://eclipsetutorial.sourceforge.net/totalbeginnerlessons.html
Class Hours and Location	Tuesday 10:00- 11:45 LB 201 Thursday 13:00 – 13:45 LB 201
Evaluation Criteria	Quizzes (1-2): 10% Labs: 20% Homework (5): 20% Midterm: 25% Final: 25%
Grading Policy	AGU GRADING POLICY
Attendance Policy	Each student is expected to attend to at least 50% of the classes. If not he/she will get NA as the final grade.

Classwork	*Lectures* Each week lectures will be in class. Attendance will be taken in class. *Quizzes* You will work multiple choice or explanation questions at the beginning of a class. Quizzes aim to make the students come prepared to lectures. *Labs* In laboratory assignments, you will work on a self-paced problem. At the end of each lab session you must submit your work to Canvas. In some laboratory sessions we can cover lecture material. *Homework* You can discuss homework with other students but your solution should be developed alone and should not resemble to others. *Exams* The exams will require you to solve computing problems, which are typically submitted as a text document and/or source codes. You are not allowed to collaborate with others in exams. *Late Submission Policy* It is the student's responsibility to follow the classes and do the assignments on time. Late submissions for homework will be subject to a penalty of 10% per day. Late submissions for lab work will be subject to a penalty of 30% per day. *Make-Up Policy* There are no make-ups in homework assignments, labs and quizzes. The student may be exempt from these assignments if a written and formal documentation is provided. Possible reasons for excused absences include serious illnesses, illness or death of a family member, university related trips and other serious circumstances. Acceptable documents for claiming an excused absence include medical doctor's statements, petitions related to official university travels, court related documents, etc. If the student misses an exam (midterms or final) he or she can take a make-up exam upon submitting a formal document.
Weekly Schedule	Week 1: Java primer Week 2: Object oriented design Week 3: Object oriented design, fundamental data Structures, arrays Week 4: Fundamental data structures, arrays, linked lists Week 5: Fundamental data structures, linked lists Week 6: Algorithm analysis Week 7: Semester break Week 8: Algorithm analysis Week 9: Midterm exam Week 10: Recursion Week 11: Recursion Week 12: Stacks, queues Week 13: Lists and iterator ADTs

	Week 14: Lists and iterator ADTs Week 15: Trees Week 16: Final Exam
Instructor	Dr. Cavidan Yakupoğlu Karaağaç E-mail: cavidan.yakupoglu@agu.edu.tr Office: BA112 Office hours: Through appointment by e-mail
Teaching Assistants	Burak Kolukısa E-mail: burak.kolukisa@agu.edu.tr Hüseyin Akkaş E-mail: huseyin.akkas@agu.edu.tr
Academic Honesty	Each student is expected to abide by the Abdullah Gül University Code of Academic Integrity. Any work submitted by a student in this course for academic credit will be the student's own work. Cheating is strictly prohibited and is not allowed in quizzes, homework assignments, midterms and final exam. You can discuss homework problems with other students but every student is required to submit a separate solution. Your submissions will be checked for academic misconduct and proved cheating will guarantee a zero grade and a disciplinary action. You can read the about the student discipline rules and regulations at https://oidb-tr.agu.edu.tr/yoenetmelik.
Lab Rules	• You will have 11 lab weeks. • Lab lists will be announced on Canvas. • We do not have the lab section in the first week. • The submission deadline for each lab work is the end of the class. • Late submission for lab will be subject to a penalty of 30% per day. It means if you submit after the lab hour even if in the same day, you will get 30% penalty in that day. • Be in the lab on time. • You are not allowed to attend the lab if you are late MORE THAN 10 MINUTES. • You are not allowed to leave the lab before the lab end time. • If you do not attend the lab, your lab work will be automatically graded as 0 (zero) for that week. • TAs will take the attendance for the lab sessions. • For lab make-up policy, *Make-Up Policy (*mentioned above) will be applied. • You are not allowed to use your PHONES during the lab hours.
Content Sharing	• Announcements, course content etc. will be posted on Canvas. • Check your Canvas regularly. • The submission for assignments, lab work will be done on Canvas.