

CS0455 – ALGORITHMS AND INFORMATION STRUCTURES

Fall 2022 Syllabus

INSTRUCTOR: Sandro Marchegiani

OFFICE: 214 Blackington Hall

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WEBPAGE: See Canvas

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OFFICE HOURS

12 – 1 Mon, 12 – 1, 2 – 3 Wed, Fri, 11 – 12 Th. Also available at other times – email to check.

COURSE DESCRIPTION

This course will emphasize the study of the most commonly used algorithms and their complexities along with basic data structures with emphasis on stacks, queues, trees, lists, and graphs and their implementation. Algorithms will incorporate discrete mathematical structures for solving software problems.

PRE-REQUISITES

CS Majors: C- in CS 0410 and CS0411 and (C- in CS 0406 or MATH 1012)

COE Majors: CS 0417 and EE 0445

CO-REQUISITE

CS 0045

TEXT

Data Structures and Abstractions with Java, Carrano & Henry, 5th Edition, Pearson, 2019.

ISBN: 978-0134831695.

COURSE REQUIREMENTS

The requirements for CS0455 include regular class attendance, reading of text assignments, completion of assigned problems in the text or handouts, quizzes, hourly exams and a comprehensive final exam.

There will be approximately 6 quizzes. Quizzes cannot be made up but the worst score will be dropped.

There will be three exams. If a student has to miss an exam the instructor must be contacted ahead of time with a valid excuse.

PLAGIARISM

Any form of plagiarism which include copying or imitating the language, ideas, thoughts, or work of another person and passing off the same as one's own work discovered by the instructor will result in a zero for the first offense and an F for the course for any subsequent offense.

DISABILITIES

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Health and Counseling Services, G-4 Student Union, 814-269-7119 as early as possible in the term. The Office of Health and Counseling Services will verify your disability and determine reasonable accommodations for this course.

GRADING WEIGHT

Homework/Quizzes: 30%
2 Exams: 20% each
Comprehensive Final Exam: 30%

GRADING SCALE

92% - 100%	A
82% - 88%	B
72% - 78%	C
62% - 68%	D
Below 62%	F

Plus and minus grades will be awarded to scores on the borderline based on attendance, overall work, attitude.

PROVISIONAL SCHEDULE

WEEK	CHAPTER	TOPICS
1, 2	Various	Java Topics
3, 4	1, 2, 3	Bags
5, 6	5, 6	Stacks

EXAM 1

7, 8	7, 8	Queues
9, 10	10 – 12	Lists

EXAM 2

11, 12	9	Recursion
13, 14	24, 25	Trees

Notes:

1. This schedule is provisional and subject to change.
2. No class on Monday, September 5 (Labor Day)
3. No class on Friday, October 14 (Fall Break)
3. No class from Monday, November 21 to Friday, November 25 (Thanksgiving).
4. Last day of class is Friday, December 9.

08/22