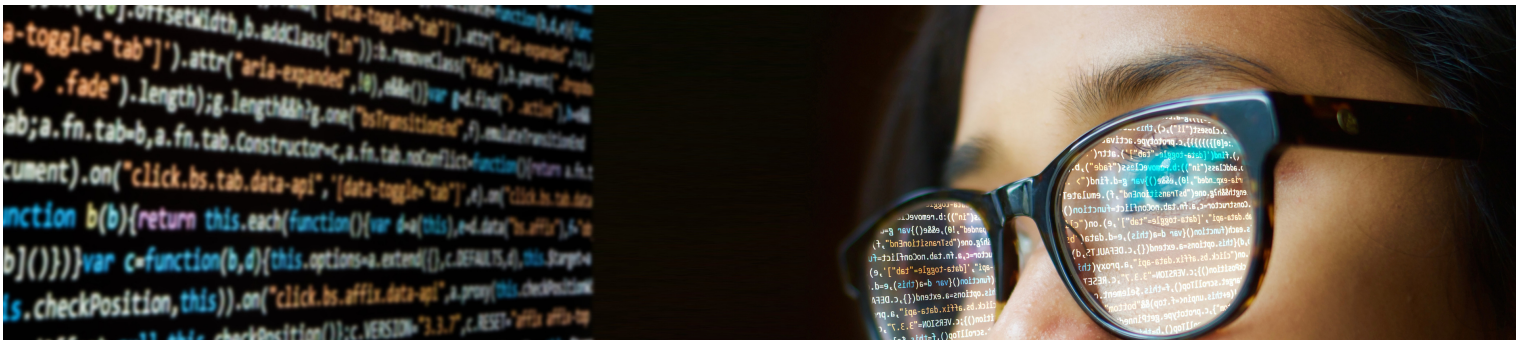
COMS 2270, 2280 & 2300 TEST-OUT, FALL 2024

THURSDAY, AUGUST 22
B0029
ATANASOFF

COMS 2270-10:30A, COMS 2280-2:00P, COMS 2300-8:00A



PROCEDURES:

Students may not test out of COMS 2270, 2280, or 2300 if they have received a grade for, including P/NP and Incomplete, or taken the class for audit. Students may not attempt test-out more than one time.

You will be billed $100 on your University bill a week after the test is completed, no matter the outcome--failure to take the test, failing the test, or passing the test.

Arrive several minutes before the scheduled exam time. These are timed tests--no one will be admitted after the exam begins.

Bring your ISU card as identification to gain admittance to the testing room.

Also bring a sharpened #2 pencil with you. No dictionaries or calculators are allowed.

Each test may be taken only once and are two hours in length.

There are no sample or practice exams available, except for the COM S 2270 course materials linked in the lower left corner of this document. Any college text may be used to prepare for the tests.

Registration closes one week before the exam date.

Visit the Registrar's test-out website for more details about test-out at Iowa State:
https://www.registrar.iastate.edu/faculty-staff/general-information/department-test-outs

Registration link: https://iastate.qualtrics.com/jfe/form/SV_9Kv8MZJGgCPeGUu

COMS 2270-OBJECT ORIENTED PROGRAMMING

Pre-r: Credit or concurrent enrollment in MATH 1430 or higher; (COMS 1270 or CPRE 1850 or SE 1850 or EE 2850)

Computer programming using objects as the mechanism for modularity, abstraction, and code reuse. Instance variables, methods, and encapsulation. Review of control structures for conditionals and iteration. Developing algorithms on strings, arrays, and lists. Recursion, searching, and sorting. Text parsing and file I/O. Interfaces, inheritance, polymorphism, and abstract classes. Exception handling. Tools for unit testing and debugging. Emphasis on a disciplined approach to specification, code development, and testing. Course intended for majors in computer science and related fields. Credit may not be applied toward graduation for both COMS 2070 and 2270. COMS 2270 examination preparation materials:
https://stevekautz.com/cs227f20/cs227f20_archived.html

COMS 2280-INTRODUCTION TO DATA STRUCTURES

Pre-r: Minimum of C- in COMS 2270; credit or concurrent enrollment in MATH 1650

An object-oriented approach to data structures and algorithms. Object-oriented analysis, design, and programming, with emphasis on data abstraction, inheritance and subtype polymorphism, and generics. Abstract data type specification and correctness. Collections including lists, stacks, queues, trees, heaps, maps, hash tables, and graphs. Big-O notation and algorithm analysis. Searching and sorting. Graph search and shortest path algorithms. Emphasis on object-oriented design, writing and documenting medium-sized programs. This course is designed for majors.

COMS 2300-DISCRETE COMPUTATIONAL STRUCTURES

Pre-r: Minimum of C- in COMS 2270 and MATH 1650; ENGL 1500

Concepts in discrete mathematics as applied to computer science. Logic, set theory, functions, relations, cardinality of sets, combinatorics, graph theory and number theory. Proof techniques, induction, and recursion.

Interested in test-out for COMS 1270 or have questions?
csdept@iastate.edu