CS - COMPUTER SCIENCE

CS160 Computer Science Orientation ★
Credits 4   Summer - even years/Fall/Winter/Spring

Registration Requirement: RD090 and WR090, or IECC201R and IECC201W; and MTH095; each with a grade of "C" or better, or placement above stated course levels.
This course explores the discipline of computer science and is intended for both computer science majors and students in other disciplines. This course provides an overview of computer architecture, software development engineering, data organization and representation, problem-solving strategies, ethics and the history of computing and its influences on society. The student begins to develop the basics of software development skills and is exposed to both low-level and high-level programming languages.
This course fulfills: Non-Lab Science

CS161 Computer Science I
Credits 4   Fall/Winter

Registration Requirement: RD090 and WR090, or IECC201R and IECC201W; and MTH095, or MTH098; each with a "C" grade or higher, or placement above stated levels.
This course is an introduction to fundamental concepts of computer science including problem-solving, algorithm and program design, data types, control structures, repetition structures, functions and arrays. This course is designed for computer science majors and for students in other disciplines.
This course fulfills: Non-Lab Science

CS162 Computer Science II
Credits 4   Winter/Spring

Registration Requirement: CS161 and MTH095 or higher, excluding MTH098.
This course is an introduction to object-oriented programming and to software engineering. Students will write programs that use structs, classes, inheritance and polymorphism to manage objects. Additional topics include recursion, information hiding, testing, and the use of debugging tools.
This course fulfills: Non-Lab Science

CS205 Systems Programming and Architecture
Credits 4   Spring

Registration Requirement: CS162 with a grade of "C" or higher, MTH251 with a grade of "C" or higher.
This course is an introduction to computer architecture and to Assembly language, embedded in C programs. Topics include: Assembly instruction set architectures, purposes and interactions among major components of computer architecture, number representations, C programming, Assembly programming, and the implementation of high-level programming constructs in machine code. Required for MTM-CS.
This course fulfills: Non-Lab Science

CS250 Discrete Structures I
Credits 4   Fall

Registration Requirement: CS161 and MTH251 with a grade of "C" or better; or placement above stated course level.
This course is recommended for students transferring in Computer Science, Software Engineering and Computer Engineering. CS 250 is an introduction to the mathematical elements of computer science. Topics include: sets, graphs, trees, functions, recursive definitions, solving recurrences, relations, proof techniques, counting techniques and discrete probability.
This course fulfills: Non-Lab Science

CS251 Discrete Structures II
Credits 4   Winter

Registration Requirement: CS250 and MTH251 with a grade of "C" or better, or higher placement on the college placement test.
This course is recommended for students transferring in Computer Science, Software Engineering and Computer Engineering. Topics include: logic, propositions and predicate calculus, formal reasoning, deduction, resolution, formal proofs, inference and algebraic properties of Boolean expressions and abstract data types.
This course fulfills: Non-Lab Science

CS260 Data Structures
Credits 4   Fall/Spring

Registration Requirement: CS162 with a grade of "C" or higher, and MTH111 or MTH111Z with a "C" or higher.
This course is an introduction to data abstraction with formal specification. Topics covered include elementary algorithm analysis; basic concepts of data and its representation inside the computer; linear, linked and orthogonal lists; and tree structures. Data structures are implemented as abstractions and used to execute sorting and search strategies and data management.
This course fulfills: Non-Lab Science

Course fees are subject to change. Additional section fees (web, hybrid, etc.) may apply.

★ Course offered online
⊕ Cultural Literacy course