Staff
Christine Rios presented to

excellence in the relatively new area of the design, production, and implementation of digital communications media. Included are such areas as web page design, digital visual and aural communications strategies and theory, interactive media design, media programming, digital presentation techniques, and technological advances in digital communications.

The Computer Science Minor is intended for students interested primarily in pursuing a career in computer science or a related field immediately upon graduation.

The Computer Information Systems Minor will provide the student with a general understanding of analysis, design, and implementation of applications via third- and fourth-generation programming languages and pre-written packages. This minor is intended for the student expecting to use computers in a job-supportive mode.

CSC 100 and 105 are not applicable to any major/minor in the department.

I. Major in Computer Science—42 hours
   A. CSC 115 (or 105 and 106), 125, 160, 205, 255, 270.
   B. CSC 321, 365, 425, 341 or 455, 498.
   C. Electives: 9 hours (3 hours must be upper-level).
   D. Prerequisites: MAT 205, 211-12, 315.

II. Major in Information Technology—39 hours
   A. Prerequisites: MAT 205 and Technical Writing
   B. CSC 115 (or CSC 105 and 106), 125, 130, 235, 335, 360, [B.

7118 s, 130, 235, B. CSC 360 and 361.   e4

the outstanding senior in the department based on demonstrated creativity, enthusiasm, and academic achievement.

Curriculum

The department offers seven plans of study: Computer Science major, Information Technology major, Digital Media Studies major, Computer Science minor, Computer Information Systems minor, Digital Media Studies minor, and an interdisciplinary minor in Computational Engineering Science.

Upon completion of the Computer Science Major, the student will have an understanding of and an appreciation for the interrelation of the main areas of study in Computer Science. The major provides a solid foundation of the concepts while

IV. Minor in Computer Information Systems—21 or 22 hours
   A. CSC 115 (or CSC 105 and 106).
   B. CSC 125 or 255—4 or 3 hours.
   C. CSC 235, 321, 360, 365.
   D. CSC 395 or 411—3 hours.

V. Minor in Digital Media Studies—21 hours
   A. Choose two courses from each list:
      1. ART 120, 221, 345, 346, 347, 348
      2. COM 220, 236, 320, 327, 356, 365
      3. CSC 200, 265, 335, 360, 361
   B. A -3-hour course in area of emphasis must be chosen from one of the lists above.

Science. Its purpose is to produce a student aesthetically, theoretically, and technologically trained and capable of
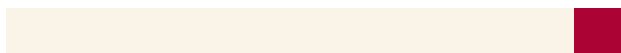
VI. Minor in Computational Engineering Science—18 hours
A. EGR 109, 209, 325
B. CSC 255, 329
C. MAT 315, 360
D. If a student has taken all required courses but needs additional credits for the minor as the courses above count toward other degrees, students can (with advisor approval) count any other math, science, computer science, or engineering course that does not already fulfill a major/minor degree requirement.

Assessment of Majors

All senior computer science majors must take the Major Field Test in computer science as one requirement for CSC 498 (see below).

Student Organizations

The ACM (Association for Computing Machinery) Student Chapter is composed of students who are interested in today's world of computing. The club promotes an increased knowledge of the science, design, development, construction, languages, and applications of modern computing machinery. It provides a means of communication between persons interested in computing machinery and their applications.

Course Offerings in Computer Science (CSC)
( ) Hours Credit; F–Fall, W–Winter; S–Spring; Su–Summer

100. Introduction to Computer Literacy (3) F, S
An introductory class on computer literacy for the non-major/minor adult student. This course is not intended for the traditional student. The purpose of the course is to prepare the student for successful use of computer technology and to achieve competency through hands-on practice. Cannot be taken after CSC 105.

105. Survey of Microcomputing Applications (3) F, S
An introduction, for the non major/minor, to computers and their applications. Includes computer and information literacy, but the main emphasis is on competency with software through hands-on practice. Due to content overlap, students cannot get credit for both 105 and 115.*

106. Algorithm Development (1) As Needed
How to analyze a problem and design a solution with a specific and explicit sequence of steps that must be performed. Emphasis is on logical thinking and debugging, not on the syntax of any particular programming language. This course is intended for students who need CSC 115 but have already completed CSC 105. It cannot be earned for credit after earning credit in CSC 115.

115. Computer Science: Introduction and Overview (3) F, S
Introduction exposing majors/minors to the breadth and interrelationships of courses in the field and empowering others for a continuous exploration of today's technical society. A language-independent overview of hardware and software with emphasis on problem solving and algorithm development. Due to content overlap, students cannot get credit for both 105 and 115.* Must earn a C or higher to apply to majors in the department.
*Either 105 or 115 apply to the B.S. specific core, but not both.

125. Computer Science I: Programming in Java (4) S
Prerequisite: CSC 115.
Basic concepts of problem solving, algorithm design and analysis, abstract data types, and program structures. GUI development will be introduced and the object-oriented programming paradigm will be emphasized. Students will design, implement, debug, test, and document programs for various applications. Must earn a C or higher to apply to major/minor.

130. System Administration and Maintenance (3) S—Alternate Years
Introduces system administration and maintenance as well as platform technologies. Includes operating systems, applications, administrative activities and organization, and computing infrastructures. Focuses on the Linux operating system.

160. Digital Systems (3) F
Corequisites: CSC 115.
Binary codes, Boolean algebra, combinational logic design, flip-flops, counters, synchronous sequential logic, programmable logic devices, MSI logic devices, adder circuits.

200. Mobile Device Programming (3) F
Prerequisite: CSC 115.
Recommended Prerequisite: CSC 125
Covers the fundamental programming principles, software architecture and user experience considerations underlying handheld software applications and their development environments.

205. Computer Science II: Algorithms and Data Structures (3) F
Prerequisite: CSC 125.
A study of the complexity of algorithms and advanced data structures, including trees and graphs. Tools for analyzing the efficiency and design of algorithms, including recurrence, divide-and-conquer, dynamic programming, and greedy algorithms.

220. Computer Repair and Maintenance (3) S
Prerequisite: CSC 115.
A hands-on approach to competence in configuring, installing, diagnosing, repairing, upgrading, and maintaining microcomputers and associated technologies. The course covers both core hardware and OS technologies.

235. Computer Ethics (3) S
Major social and ethical issues in computers and the Internet, including impact of computers on society and the computer professional's code of ethics.

255. Programming in C (3) S
Prerequisites: CSC 115 or EGR 109.

455. Programming Languages (3) S—Alternate Years
Prerequisite: CSC 125 or 255.
Issues in programming language design, specification, and implementation: overview and comparison of major contemporary languages; analysis of translation process with focus on context-free grammars; and investigation of data representation, binding, sequence control, logic and object oriented paradigms. Theory is augmented by implementation of a tokenizer and parser for a simple language.

465. Formal Language (3) As Needed
Prerequisites: CSC 255 and MAT 315. Recommended prerequisite: CSC 455.
Theoretical foundations of computer science including formal languages and automata, parsing of context-free languages, Turing machines, computability, and complexity.

485. Internship in Computer Science (1-3) As Needed
Prerequisite: CSC 115; one of CSC 220, 235; one of 321, 360, 365.
Selected students are assigned as interns to obtain supervised practical work related to the CS discipline at a business or non-profit organization.

498. Computer Science Seminar (2-3) S
Prerequisite: 20 hours of CSC and taken in Senior Year.
The setting for administering the Major Field Test and