
G. Jan Wilms (1992). University Professor of Computer Science and Department Chair. B.A., Katholieke University Leuven, Belgium; M.A. (English), University of Mississippi; M.S. (Computer Science), University of Mississippi; Ph.D. (Computer Science), Mississippi State University.

Brian Glas (2019). Assistant Professor of Computer Science. B.S. (Computer Science) and M.B.A., Union University.

Robert Talbott (2021). Assistant Professor of Computer Science. B.S. (Computer Science), Southern Illinois University; M.S. (Information Systems), University of Missouri; M.B.A., Lindenwood University; Ed.D. (Instructional Leadership), Lindenwood University, Higher Education Administration.

Amy Eads (2022). Academic Secretary—Computer Science, Engineering, Math, and Physics.

A **Departmental Award** is given to the senior who places first in the Major Field Test for Computer Science as partial fulfillment of 498.

First Year Programming Award is awarded to a computer science student by the Department of Computer Science. A student is selected for excellence and expertise in first year programming courses.

The **Bill Truex Award in Computer Science** is presented to the outstanding senior in the department based on demonstrated creativity, enthusiasm, and academic achievement.

The department offers eight plans of study: Computer Science major, Information Technology major, Cybersecurity major, Computer Science minor, Cybersecurity minor, Computer Information Systems minor, interdisciplinary minors in Digital Media Studies and 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 emphasizing practical application; therefore, the graduate will be able to continue study in Computer Science at the graduate level or enter the job market.

Whereas the CS major is more theoretical in nature, InformDC 0.1 technology is more practical and identifies the organization's issues and minor teams. It deals more

IV. Minor in Computer Science—21 or 22 hours

- A. CSC 115 (or CSC 105 and 106), 235; CSC 321 or 365—9 hours.
- B. CSC 125 or 255—4 or 3 hours.
- C. Select CSC Upper-level Elective—3 hours
- D. Select one track:
 - 1. CSC 205 and 347.
 - 2. CSC 160 and 270.
 - 3. CSC 220 and 425.
 - 4. CSC 360 and 361.

V. Minor in Cybersecurity—18 hours

- A. Prerequisite: MAT 114
- B. CSC 117—3 hours
- C. CSC 224, 337—6 hours
- D. CSC 357, 437, 447—9 hours

VI. 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.

VII. 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.

VIII. 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.

Majors are required to take CSC 498, which is the culmination of the major and requires the comw11 TwC (t alrof)-0.8 (t

**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- As Needed

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- As Needed

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.

224. Introduction to Business Analytics and Decision Making (3) S

Prerequisites: MAT 111 or 201 or higher; MAT 114 or 208.

Reciprocal credit: BAD 224.

An introduction to data-driven decision making using computer-based techniques to convert data into information.

Topics include optimization, regression, descriptive/inferential statistics, and spreadsheet-based simulation.

Examples are from business disciplines including economics, finance, management, and marketing.

235. Computer Ethics (3) S- As Needed

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.

Introduces the procedural programming paradigm using ANSI C. Must earn a C or higher to apply to CSC major/minor.

**265. Fundamentals of Human Computer Interaction (3) F—
Alternate Years**

Corequisite: CSC 115.

Introduces HCI, including human factors, HCI aspects of application domains, human-centered evaluation, developing effective interfaces, accessibility, emerging technologies, human-centered software development.

270. Computer Architecture (3) S

Prerequisite: CSC 160.

Introduction to the architecture of stored-program digital computer systems including processor and external device structures and operations, machine operations and instructions, and assembly language concepts and programming.

317. Identity and Access Management (3) F

Prerequisite: CSC 115.

Introduction to the discipline of identity and access management, covering topics like authentication, access control, identity, provisioning and deprovisioning lifecycles, and other related topics both for local networks and cloud-based systems.

321. Database Management Systems (3) F

Prerequisites: CSC 115 and Junior standing.

Hands-on approach to the design of databases: conceptual design using E-R model and logical design using the relational model and database programming using SQL. The architecture of database application is discussed including the 3-tiered model and web access. Queries, forms, reports and application will be studied by implementing them in a client-server environment.

327. Operational Security (3) S

Prerequisite: CSC 115.

Operational level security topics including digital forensics and incident response (DFIR), logging and monitoring, asset management, service level agr, sr5. api08 Tc 0.0. h.6 (r)1 T*1 (5.).6

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 addressing topics where the department perceives need for additional instruction. Students will synthesize previously learned concepts by developing and implementing a solution to a real-world programming problem. The course may be modified at the discretion of the department. Students may be required to take the Major Field Exam or some other industry certification.

Available in multiple departmental prefixes:

179-279-379-479. External Domestic Study Programs (1-3) As Needed

All courses and their applications must be defined and approved prior to registering.

179PF-279PF-379PF-479PF. External Domestic Study Programs (Pass/Fail) As Needed

All courses and their applications must be defined and approved prior to registering.

180-280-380-480. Study Abroad Programs (1-4)

All courses and their application must be defined and approved prior to travel.

180PF-280PF-380PF-480PF. Study Abroad Programs (Pass/Fail) As Needed

All courses and their applications must be defined and approved prior to travel.

195-6-7. Special Studies (1-4)**295-6-7. Special Studies (1-4)**

Lower-level group studies which do not appear in the regular departmental offerings.

395-6-7. Special Studies (1-4)

Upper-level group studies which do not appear in the regular departmental offerings.

495-6-7. Independent Study (1-4)

Individual research under the guidance of a faculty member(s)

499 Seminar (1-3-)

To be used at the discretion of the department for majors only. Individual research under the guidance of a faculty member(s)