

Bachelor of Science in Computer Science - ABET Accredited Program

Major Requirements (46cr.)

CSC 226 Introduction to Database (3 credits)

Description: Fundamentals of database systems, data modeling, relational databases, and SQL.

Prerequisite: Introduction to Programming.

CSC 305 System Analysis and Design (3 credits)

Description: Study of system development life cycle (SDLC), requirements gathering, analysis, and design techniques.

Prerequisite: CSC 226 Introduction to Database.

CSC 312 Computer Architecture (3 credits)

Description: Organization and structure of computer systems, instruction sets, and assembly language programming.

Prerequisite: Introduction to Computer Science.

CSC 316 Fundamentals of Computer Security (3 credits)

Description: Basic concepts of securing systems, cryptography, network security, and threat mitigation.

Prerequisite: CSC 312 Computer Architecture.

CSC 317 Information Assurance and Security (3 credits)

Description: Strategies to ensure data integrity, availability, and confidentiality within IT environments.

Prerequisite: CSC 316 Fundamentals of Computer Security.

CSC 345 Fundamentals of Computer Network Management (3 credits)

Description: Principles of managing computer networks, including protocols, architectures, and network

Bachelor of Science in Computer Science - ABET Accredited Program

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troubleshooting.

Prerequisite: CSC 312 Computer Architecture.

CSC 385 Internet Computing (3 credits)

Description: Technologies behind web applications, internet protocols, and web development principles.

Prerequisite: CSC 226 Introduction to Database.

CSC 405 Systems Integration (3 credits)

Description: Combining different computing systems and software applications to function as a coordinated whole.

Prerequisite: CSC 305 System Analysis and Design.

CSC 414 Applied Operating Systems (3 credits)

Description: In-depth study of operating system concepts, including process management, memory management, and file systems.

Prerequisite: CSC 312 Computer Architecture.

CSC 425 Data Communications and Computer Networks (3 credits)

Description: Covers transmission methods, network design, TCP/IP protocols, and wireless communication.

Prerequisite: CSC 345 Fundamentals of Computer Network Management.

CSC 446 Applied Database Systems (3 credits)

Description: Advanced database concepts, database design, and database-driven application development.

Prerequisite: CSC 226 Introduction to Database.

Bachelor of Science in Computer Science - ABET Accredited Program

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CSC 450 Human-Computer Interaction (3 credits)

Description: Design and evaluation of user interfaces, usability principles, and user experience design.

Prerequisite: CSC 305 System Analysis and Design.

CSC 463 Advanced Software Development (3 credits)

Description: Techniques and practices for building large-scale, maintainable software systems.

Prerequisite: CSC 305 System Analysis and Design.

CSC 480 Internship (3 credits)

Description: Practical experience in the IT field to apply academic knowledge in a professional environment.

Prerequisite: Completion of at least 90 credits.

CSC 490 Senior Study (3 credits)

Description: Capstone project involving research, development, and presentation in a specialized computing area.

Prerequisite: Final year standing and departmental approval.

Liberal Arts Curriculum

ENG 101 English Composition (3 credits)

Description: Development of writing skills, including grammar, composition, and research paper techniques.

Prerequisite: None.

MTH 110 Pre-Calculus Mathematics (3 credits)

Description: Fundamental concepts in algebra and trigonometry as preparation for calculus.

Bachelor of Science in Computer Science - ABET Accredited Program

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Prerequisite: High school mathematics.

COM 201 Public Speaking (3 credits)

Description: Techniques of effective oral communication, speech writing, and public presentation skills.

Prerequisite: None.