All CS Tech Electives have limited enrollment. Students are encouraged to register early for best selection.

Fall 2024 CSCI Tech Electives

Schedule and course listings subject to change

CSCI 4202 Intro to AI, Williams • Pre-requisite: CSCI 3412 CSCI 4220 Social Networks & Informatics, Debnath • Pre-requisite: CSCI 3412 CSCI 4625 Computer Vision, Al Borno • Pre-requisite: CSCI 3412 CSCI 4772 Mobile & IoT Security, Li • Pre-requisites: CSCI 3761 & 3453 CSCI 4800 Cloud Computing, Ra • Pre-requisite: CSCI 3761 & 3453 CSCI 4800 Natural language Processing & Large Language Models (NLP and LLMs), Banaei-Kashani • Pre-requisite: CSCI 3412 & MATH 2411 CSCI 4800 GenAI, McCarthy • Pre-requisite: CSCI 3412 CSCI 4800 Explainable AI, Williams • Pre-requisite: CSCI 3412

BACS Only

Please meet with your advisor for additional selections

CSCI 3910 Web Dev. w/PHP & MySQL Database, Lakhani

o Pre-requisite: CSCI 3287

Fall 2024 BSCS Breadth Courses

Additional courses beyond breadth area requirements will count toward as CS electives.

Secure Computing:

CSCI 4741 Principles of Cybersecurity, Jafarian **Pre-requisite:** CSCI 3761 Required for the Cybersecurity & Secure Comp. Cert>

Data Science:

CSCI 4930 Machine Learning, Biswas Pre-requisites: CSCI 3412 & MATH 3195

Scientific Computing:

CSCI 3560, Probability & Computing, Lakhani Pre-requisite: CSCI 2511 and MATH 2411

CSCI 4650, Numerical Analysis I, math dept Pre-requisite: Math 3191 or MATH 3195

System Software:

CSCI 4565 Intro to Computer Graphics, Choi Pre-requisite: CSCI 3412 & MATH 3191 or 3195

Fall 2024 BSCY Tech Electives

Please see your advisor.

BACS Free Electives

CSCI 1510 Logic Design CSCI 2525 Assembly Language All CS Tech Electives have limited enrollment. Students are encouraged to register early for best selection.

Special Topics Descriptions

CSCI 4800 - Shader and GPU for AI applications

Graphics Processing Unit (GPU) programming is a cutting-edge field that combines graphics and computation to create stunning visuals and powerful applications. This course will introduce how to use GPU programming for various applications, from graphics and visualization to AI and machine learning. Students will learn the basics of graphics shaders, which are programs that run on the GPU and control how objects are rendered on the screen. Another main topic will be OpenCL and CUDA, which are frameworks that allow you to write general purpose programs that run on the GPU and leverage its parallel processing power. Emphasis will be on how GPUs are used for AI and machine learning tasks. **Pre-requisites:** CSCI 3412