

Schedule & course listings subject to change

Spring 2024 Graduate Category A Courses

- **CSCI 5573 Operating Systems, Ra**
 - Foundational pre-reqs: CSCI 2312, 2421, 2511, 3412 & 3453
- **CSCI 5593 Advanced Computer Architecture, Alaghband**
 - Foundational pre-reqs: CSCI 2312, 2421, 2511, 3412, 3453 & 4591

Spring 2024 Graduate Category B Courses

- **CSCI 5110 Applied Number Theory, Gethner**
 - Foundational pre-reqs: CSCI 2312, 2421, & 2511
- **CSCI 5211 Mobile Comp. & Prog., Lakhani**
 - Foundational pre-reqs: CSCI 2312, 2421, 3412 & 3453
- **CSCI 5565 Intro to Computer Graphics, Choi**
 - Foundational pre-reqs: CSCI 2312, 2421, 2511 & 3412; MATH 3191 or 3195
- **CSCI 5575 Cyber-Physical Systems, He**
 - Foundational pre-reqs: CSCI 2312, 2421, 2511, 3412 & 3453
- **CSCI 5620 Computational Motor Control, Al Borno**
 - Foundational pre-reqs: CSCI 2312, 2421, 2511 & 3412
- **CSCI 5742 Cybersecurity Programming, Jafarian**
 - Required for the Cyber Security & Defense Certificate
 - Foundational pre-reqs: CSCI 2312, 2421, 2511, 3412 & 3453
- **CSCI 5773 Introduction to Emerging System Security, Li**
 - Foundational pre-reqs: CSCI 2312, 3412 & 3453
- **CSCI 5800-001 Battery Management Systems, He**
 - Foundational pre-reqs: CSCI 2312, 2421, 2511, 3412 & 3453
- **CSCI 5800 Shader and GPU for AI Applications, Choi**
 - Foundational pre-reqs: CSCI 2312, 2421, 2511, 3412
- **CSCI 5931 Deep Learning, Biswas**
 - Foundational pre-req: CSCI 3412

Spring 2024 Graduate Category C Courses

- **CSCI 5011 Software Project Management Support, Newell**
 - Required for the Software Engineering Certificate
 - Foundational pre-reqs: CSCI 2312, 2421, 2511 & 3412

Spring 2024 Courses to Satisfy MS Course Project

- **CSCI 5620: Computational Motor Control, Al Borno**
- **CSCI 5773 Introduction to Emerging System Security, Li**
- **CSCI 5800 Shader and GPU for AI Applications, Choi**

Special Topics Description

CSCI 5800 Battery Management Systems, He

With the advancement of Zero Emission Vehicles, the technology required to design and maintain their complex battery systems is needed not only by the vehicle designers, but by those who will provide recharging and maintenance services, as well as utility infrastructure providers. Battery management systems are electronic systems that monitor and maintain the battery systems. This course prepares for the era of Zero Emission Vehicles by introducing the core functions of battery management systems and the common practices on how these functions are implemented. Hands-on labs on each of the main functions of battery management systems are designed and integrated in this course.

CSCI 5800 Shader and GPU for AI Applications, Choi

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.