All courses are remote unless indicated and require attendance via Zoom during class time.

**Spring 2021 Graduate Category A Courses**

- CSCI 5573 Operating Systems, Ra – MW 5:00-6:15
- CSCI 5593 Advanced Computer Architecture, Alagband – TTH 3:30-4:45

**Spring 2021 Graduate Category B Courses**

- CSCI 5173/7173 Comp Complexity & Algorithms, Altman – MW 11:00-12:15
- CSCI 5407 Security & Cryptography, Gethner – TTH 12:30-1:45
- CSCI 5408 Applied Graph Theory, Gethner – TTH 2:00-3:15
- CSCI 5565 Intro to Computer Graphics, Choi – MW 3:30-4:45
- CSCI 5575 Cyber-Physical Systems, He – Hybrid, MW 2:00-3:15
  - This course will meet on campus for the first three weeks of the semester.
- CSCI 5742 Cybersecurity Programming, Ogle – Hybrid, TTH 9:30-10:45
  - This course will meet on campus Tuesdays and remotely Thursdays.
  - Required for the Cyber Security and Defense Certificate
  - This course requires knowledge of Machine Learning equivalent to CSCI 4930.
- CSCI 5800-E01 Machine Learning Systems, Banaei-Kashani - Online
- CSCI 5931 Deep Learning, Biswas – TTH 11:00-12:15
- CSCI 5952/7952 Big Data Science, Banaei-Kashani - Online

**Spring 2021 Graduate Category C Courses**

- CSCI 5011 Software Project Management Support, Williams – MW 9:30-10:45
  - Required for the Software Engineering Certificate

**Spring 2021 Courses to Satisfy MS Course Project**

- CSCI 5565 Intro to Computer Graphics
- CSCI 5575 Cyber-Physical Systems
- CSCI 5800-E01 Machine Learning Systems
- CSCI 5931 Deep Learning
- CSCI 5952/7952 Big Data Science
Spring 2021 Special Topics Course Descriptions

CSCI 5800-001 Computational Modeling of Animal Movement, Al Borno

This course introduces techniques for the modeling and simulation of animal movement. These techniques come from computer graphics, robotics and reinforcement learning. The topics that we will cover include biomechanics modeling, trajectory optimization, feedback control, deep reinforcement learning, and the neuroscience of motor control. At the end of the course, students will learn how train control policies for virtual agents in computer animation or robotics applications. Student evaluation will be based on a course project.

This course requires knowledge of Machine Learning equivalent to CSCI 4930.

CSCI 5800-E01 Machine Learning Systems, Banaei-Kashani

The special topics course is a seminar-type course where we study how one can implement end-to-end large-scale systems to execute data science cycle (including data cleaning/preprocessing, management, querying, modeling/machine learning, and visualization).