

## Computer Science M.S. 2016-2017

### **Core Requirements (12 Hours)**

The following courses or their approved substitutions are required for both the thesis and the extended course work options:

- [CSCI 5333](#) Database Management Systems
- [CSCI 5432](#) Design and Analysis of Algorithms
- [CSCI 5531](#) Advanced Operating Systems
- [CSCI 6530](#) Research Methods in Computer Science

### **Computer Science Thesis Option (21 hours)**

Complete the following courses:

- [CSCI 6939](#) Master's Thesis Research

A student must take an additional 15 hours of electives. Pending faculty advisor approval, at most 3 credit hours may be taken at the 4000-level and at most 6 credit hours may be taken from SWEN/ CENG/ SENG rubrics.

Note: All electives must be approved before enrolling.

### **Computer Science Extended Course Work Option (24 hours)**

Complete the following courses:

- [CSCI 5134](#) Concurrent Programming and Software Modeling
- [CSCI 6838](#) Research Project and Seminar

A student must take an additional 18 hours of CSCI and CINF electives, pending faculty adviser approval. At most, six credit hours may be taken at the 4000-level and at most, three credit hours may be taken from SWEN/ CENG/ SENG rubrics.

Note: [CSCI 6838](#) must be taken during the last 12 hours, after completion of [CSCI 5531](#) and [CSCI 5333](#). All electives must be approved before enrolling.

### **Computer Science Specializations**

Students interested in developing a sub-plan should take the corresponding courses:

#### **Database Systems Specialization**

- [CSCI 5433](#) Object-Oriented Database Systems
- [CSCI 5533](#) Distributed Information Systems
- [CSCI 5633](#) Web Database Development
- [CSCI 5833](#) Data Mining: Tools and Techniques

### **Network Performance and Security Specialization**

[CENG 5333](#) Network Performance Analysis

[CSCI 5132](#) Internet Protocols

[CSCI 5233](#) Computer Security & Integrity

[CSCI 5234](#) Web Security

[CSCI 5235](#) Network Security

[CSCI 5631](#) Foundations for Service Oriented Architectures

### **Data Mining and Computational Bioinformatics Specialization**

[BIOT 5733](#) Bioinformatics

[CENG 5634](#) Artificial Neural Networks

[CSCI 5530](#) Pattern Classification

[CSCI 5532](#) Pattern Recognition and Image Processing

[CSCI 5833](#) Data Mining: Tools and Techniques

[CSCI 5933](#) Computational Bioinformatics