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