

## Computer Science, MS

Effective 2020-2021

College of Engineering

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The MS in Computer Science program combines computer science fundamentals with practical knowledge and technical excellence in the most advanced technologies. Research is funded by agencies including the National Science Foundation, the Department of Defense, the National Security Agency, the Department of Energy and national laboratories, and others. The research interests of the faculty include cyber security, cyber identify, artificial intelligence and data science, big data, visual analytics and virtual reality, software engineering and formal methods, distributed and web-based systems, multiagent systems, trustworthy cloud computing and high performance computing. In addition to a general area, students can take elective courses in three focus areas: Cyber Security, Software Engineering, and Artificial Intelligence and Data Science.

### Additional Admission Requirements

- Unconditional admission requires a BS in Computer Science

### Program Outcomes:

Graduates of the Computer Science Master's program will be able to: (1) apply knowledge of complex mathematics and computer science to develop software solutions to real world problems, (2) analyze and synthesize novel solutions to critical problems within the area of computer science, (3) design and implement software systems, (4) understand professional, legal and ethical issues, (5) effectively communicate, both orally and in writing, and (6) engage in lifelong learning.

### Degree Requirements

Total credit hours: 30

- Core courses (9 credits): COMP 710, 755, 775

#### Thesis option

- COMP electives (9 credits): Take 9 credits of additional COMP 700-899 courses with approval of advisor
- Electives (6 credits): Take 6 credit hours from COMP 700-899 or other departments with approval of advisor
- Thesis (COMP 797: 6 credits)
- Pass thesis defense

#### Project option

- COMP electives (12 credits): Take 12 credits of additional COMP 700-899 courses with approval of advisor
- Electives (6 credits): Take 6 credit hours from COMP 700-899 or other departments with approval of advisor
- Project (COMP 796: 3 credits)

#### Course option

- COMP electives (15 credits): Take 15 credits of additional COMP 700-899 courses with approval of advisor
- Electives (6 credits): Take 6 credit hours from COMP 700-899 or other departments with approval of advisor

