

# APPLIED COMPUTER SCIENCE

## Master of Science (MS) Face to Face and Online Delivery

This is a guide based on the 2024-2025 Graduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on factors such as dual enrollment, remediation, and summer enrollment. Students meet with an academic advisor each semester and use Degree Works to monitor their progress.

### CURRICULUM CHECKLIST

#### 30 Hours Required

##### Core Requirements:

- CY501 Introduction to Cybersecurity (3)
- CS506 Distributed Cloud Computing (3)
- CS591 Advanced Artificial Intelligence (3)
- CS605 Research Methods (3)
- CS609 Advanced Programming Languages (3)
- CS630 Current Topics in Human Computer Interaction (3)

##### Choose one thesis area:

Thesis area - 12 hours

- CS/CY5xx-6xx – choose 6 hours\*
- CS697 Thesis Research I (3)
- CS698 Thesis Research II (3)
- GR699 Master's Oral Examination (0)

Non-Thesis area - 12 hours

- CS/CY5xx-6xx – choose 12 hours\*
- CS690 Graduate Project (0)
- GR698 Master's Final Comprehensive Examination (0)

##### Electives may be chosen from the following with the advice of advisor:\*

- CS505 Data Mining (3)
- CS533 Mobile Computing (3)
- CS560 Computer Architecture (3)
- CS575 Advanced Web Development (3)
- CS580 Advanced Robotics (3)
- CS581 Advanced Network Programming (3)
- CS585 Formal Systems & Modeling (3)
- CS603 Introduction to Data Analytics (3)
- CS612 Simulation & Modeling for Computing (3)
- CS631 Advanced Software Engineering (3)
- CS632 Emerging & Converging Technologies & Computing (3)
- CS633 Digital Signal & Image Processing (3)
- CS634 Machine Learning (3)
- CS640 Advanced Database Systems (3)
- CS645 Internet of Things (3)
- CS650 Theory of Computation (3)
- CS653 Special Topics (3)
- CS693 Independent Study (3)
- CS699 Internship (3)
- CY510 Information Security & Assurance (3)
- CY520 Information Security in Systems Administration (3)
- CY610 Web Application Security (3)
- CY620 Computer Forensics (3)
- XX5xx/6xx Any relevant course from other departments and listed as electives – up to 6 hours

### Admission Requirements

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. A bachelor's degree in computer science, computer information systems or related field  
\*Students with bachelor's degrees from other fields will be required to take up to 2 prerequisites related to Fundamentals of Computing and Programming (provisional admission).
2. An undergraduate GPA of 3.0 on a 4.0 scale
3. Six completed hours of science and six completed hours of mathematics in the undergraduate degree

#### Probationary Admission

Applicants who do not meet the general and/or program's admission requirements may be considered for probationary admission upon approval by the graduate program coordinator. Students admitted on probation must complete nine credit hours that count towards the degree with a grade of "B" or better to continue in the program.

#### For graduate studies admissions deadlines, visit

<https://semo.edu/admissions/requirements/graduate.html>.

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2024-2025 *degree map*

