The Master of Science degree in Computer Science is designed to provide advanced study and development for students who have a basic understanding of the concepts and methodologies central to professional success in the field. The objectives of the program are to:

1. Provide students with opportunities to refine their skills and core competencies in computer science through the advancement and development of concepts, techniques, and methodologies appropriate in the field.
2. Facilitate the development of advanced skills in an environment which will ensure both a realistic and varied exposure to contemporary information processing problems.
3. Promote the integration and application of cutting edge concepts and approaches in the computer science field.

Admission Requirements

For unconditional admission, students must satisfy the following:

1. A student must have earned a bachelor’s degree in Computer Science (CS) or a related field from a regionally accredited four-year college or university.
2. A student must meet the grade point average and Graduate Record Examination (GRE) or equivalent test score. Requirements as follows:
   - Official transcripts of all academic work.
   - A minimum overall undergraduate grade point average of 2.5 (on a 4.0 scale) or a 3.0 grade point average for the last 27 semester hours (45 quarter hours).
   - A minimum composite score of 800 on the verbal and quantitative portions of the GRE.

Conditional Admission

For those students who cannot satisfy all unconditional admission requirements, conditional admission may be granted under certain circumstances. Individuals admitted on a conditional basis may satisfy the requirements for unconditional admission as follows:

1. Students must have their GRE test scores on file with the admissions office by the completion of the FIRST semester in which they are enrolled in CS courses.
2. Students failing to achieve the minimum composite score of 800 may satisfy the GRE test requirement by successfully completing 9 semester hours of graduate CS courses with a minimum grade point average of 3.0.
3. Students not having a 2.5 undergraduate grade point average may satisfy the requirement by the successful completion of 9 semester hours of graduate CS courses with a minimum grade point average of 3.0.
4. A student with a bachelor’s degree outside the field of CS may satisfy the bachelor’s degree requirement by completing ALL of the following courses:
   - MTH 2215 – Applied Discrete Mathematics
   - CS 2244 – Computer Science I
   - CS 2260 – Computer Science II
   - CS 2261 – Introduction to Computer Science Concepts
   - CS 3323 – Data Structures
   - CS 3357 – Logical Structures of Computer Design

   Additional courses may be required by the CS Graduate Advisor depending on the student’s background. A student must complete all courses with a grade point average of 3.0.

Transfer Credit

A maximum of nine (9) credit hours taken at another regionally accredited university with a grade of “B” or better can be applied to the degree. These courses must be comparable in catalog description to courses in the CS program and must be approved by the Dean of Arts & Sciences or Graduate Adviser, CS Program.
Requirements for Admission to Candidacy

Admission to the program for the M.S. in Computer Science does not constitute official admission to candidacy. Unconditionally admitted graduate students must apply for admission to candidacy within the first eighteen semester hours of graduate coursework and complete any additional requirements outlined for the specific degree program. If not completed within the first eighteen hours, a hold will be placed on the student’s registration until Degree Plan/Admission to Candidacy process is completed.

Degree Options

There are two degree options: thesis and non-thesis. In the thesis option, the student must successfully complete and defend a thesis as well as completing other requirements stated below. See Thesis Guidelines for additional information. In the non-thesis option, the student must pass a written comprehensive exam and must successfully complete a research paper.

For both options what follows should be followed by the students during their program of study.

Degree Requirements

The requirements for the degree are admission to candidacy, the successful completion of 5 graduate-level core courses and 3-5 elective courses (30 semester hours for the thesis option and 31 semester hours for the non-thesis option) with an overall grade point average of 3.0, and successful completion of a thesis or a paper. The degree requirements for the thesis and non-thesis options are as follows:

Approval Process

Thesis Option

See Thesis Guidelines.

Non-Thesis Option

1. Achieved unconditional admission to the program;
2. Completed 15 SH of graduate-level core courses;
3. Maintain a minimum overall 3.0 GPA; AND

Thesis

1. Achieved unconditional admission to the program;
2. Completed 15 SH of graduate-level core courses;
3. Maintain a minimum overall 3.0 GPA; AND

Non-Thesis

1. Achieved unconditional admission to the program;
2. Completed 15 SH of graduate-level core courses;
3. Maintain a minimum overall 3.0 GPA; AND
4. Submit an approved proposal for a research paper.

Submission of Thesis or Research Paper

The thesis must be submitted according to Thesis Guidelines. The research paper must be submitted to the department at least two months prior to graduation and must be submitted to the Dean of the Graduate School office at least two weeks prior to the end of the term of graduation. Two approved copies of the research paper are necessary, one of which will be kept by the CS department.

Curriculum

The CS degree curriculum consists of five core required courses and five (non-thesis option) or three (thesis option) elective courses. All courses offer three hours of credit except CS 6625-6626-6627, which offer one to three hours, and CS 6699, which offers one to six hours.

Thesis Option

5 Core Course ................................. 15 SH
3 Electives ........................................ 9 SH
Thesis (CS 6699) ................................. 6 SH
TOTAL ............................................. 30 SH

Non-Thesis Option*

5 Core Courses ................................. 15 SH
5 Electives ........................................ 15 SH
Research (CS 6625) .............................. 1 SH
TOTAL ............................................. 31 SH

* Also includes a comprehensive examination.

Courses

The courses for the Master of Science degree in CS are listed below:

Core Courses.............................................. 15 SH
CS 5543 – Software Engineering 3 SH
CS 5545 – Computer Architecture 3 SH
CS 5549 – Analysis of Algorithms 3 SH
CS 5547 – Systems Analysis and Design 3 SH
CS 5550 – Operating System Principles 3 SH

Elective Courses......................................... 9/15 SH
CS 6640 - Data Base Management Concepts 3 SH
CS 6641 – Society and Information Systems 3 SH
CS 6643 – Theory and Design of Compilers 3 SH
CS 6646 – Information Systems for Operations and Management 3 SH
CS 6647 – Simulation and Modeling 3 SH
CS 6648 – Operations Research 3 SH
The Master of Science degree in Criminal Justice is designed to broaden and enhance each student’s ability to understand, analyze and evaluate issues that confront the American criminal justice system. Included in the objectives of the program’s core coursework are (a) to prepare students to understand, analyze and evaluate the principles and functions of personnel administration in criminal justice applications; (b) to prepare students to understand, analyze and evaluate trends and developments affecting the interpretation of the U.S. Constitution in light of historical case precedent; (c) to prepare students to understand, analyze and evaluate the principles and functions of personnel administration in criminal justice applications; (d) to understand, analyze and evaluate issues that confront the American criminal justice system; and (d) to understand, analyze and evaluate issues that affect the structure and functioning of the criminal justice system; and (d) to understand, analyze and evaluate issues that affect the structure and functioning of the criminal justice system; and (d) to understand, analyze and evaluate the effectiveness of the American judicial process with respect to its legal basis, organization and management. Specific institutional objectives of the program are as follows:

1. to prepare students to fulfill a need in American society for professional law enforcement personnel and competent criminal justice administrators by providing educational programs that develop each student’s problem solving skills in ways that prepare the student to address the issues that arise in the dynamic and evolving criminal justice field;
2. to develop each student’s ability to synthesize and apply knowledge of the critical theories and concepts in the field of criminal justice in their problem solving analysis;
3. to develop each student’s ability to identify and develop alternative solutions to problems that confront the modern criminal justice system based on their knowledge of current theories and concepts;
4. to develop each student’s ability to evaluate and appropriately choose solutions to problems that confront the criminal justice system;
5. to develop each student’s ability to effectively communicate the results of his/her analysis.

6. to provide students who seek administrative and managerial positions in the field of criminal justice with the credentials to qualify for those positions;
7. to provide an appropriate program of graduate study for students who are interested in research in the field of criminal justice and in advanced graduate study.

**Prerequisite Requirements**

The minimum requirement for admission to the Master of Science program in Criminal Justice is a baccalaureate degree from a regionally accredited four-year institution. Students who desire to enter this program but do not have a degree in criminal justice, police administration, law enforcement, or corrections may be required to meet other criteria such as additional coursework regarding undergraduate or professional preparation. Significant professional experience may be considered. However, admission to the program does not imply official admission for the degree.

**Admission Requirements For Master of Science in Criminal Justice**

**Unconditional Admission**

Students may be admitted unconditionally if they meet the following requirements:

1. Hold a master’s or higher degree from a regionally accredited university. No test score is required. An official transcript showing completion of a master’s or higher degree is required.

   OR

2. Hold a baccalaureate degree from a regionally accredited college or university with a minimum overall undergraduate grade point average of 2.5 (4.0 scale) or a 3.0 grade point average on the last 30 semester hours. All hours attempted in the term in which the 30 semester hours were reached will be used to calculate the grade point average. All transcripts from all colleges or universities attended are required.

   AND

3. Have an acceptable score on the appropriate entrance exam (GRE 850—verbal plus quantitative, MAT 385 or 33).

**Conditional Admission**

Conditional admission may be granted under certain circumstances to applicants who cannot satisfy all unconditional admission requirements to the graduate program. See Conditional Admission requirements in the general regulations section of this catalog. Students with a baccalaureate degree from an unaccredited or otherwise accredited institution should see Unaccredited or Otherwise Accredited Student Admission.

Students with academic deficiencies (course work, GPA, GRE, or MAT scores) may be required to complete additional course work before being granted unconditional admission to the program.