

# COMPUTER SCIENCE, MS

## Introduction

The Department of Computer Science and Engineering requires master's degree candidates to complete a program of study consisting of at least 30 semester hours of graduate level computer science courses while maintaining a grade point average of at least 3.0. Graduate courses with grades below B- cannot be applied toward the completion of the graduate degree.

Students in the CSE department are required to have a personal laptop that satisfies the requirements listed on the CSE Laptop Requirement Website (<https://engineering.ucdenver.edu/laptops/#ac-computer-science-bachelor-of-science-master-of-science-3>).

## Data Science in Biomedicine Track

The Data Science in Biomedicine Track is offered under the Computer Science Master of Science degree program for students who choose Plan I - Thesis.

With this new track, students will adopt biomedical applications of data science (as a sample data science application domain) to learn data science methodologies and technologies. Upon successful graduation from the Computer Science MS program under the Data Science in Biomedicine track, students will have an official designation of data science training within their degree, which will help with employment and other opportunities.

The Data Science in Biomedicine Track requires master's degree candidates to complete a program of study consisting of at least 36 semester hours of graduate level computer science courses while maintaining a grade point average of at least 3.0. Graduate courses with grades below B- cannot be applied toward the completion of the graduate degree. In this plan students will take three "category A" courses, a minimum of four "category B" courses, six hours of MS thesis and an additional 3 courses of electives from a list of courses related to Biomedical Computing and Informatics, Bioinformatics, Health Informatics, etc.

## Adequate Progress Toward MS in Computer Science Degree

Students are expected to finish the MS degree program within five years. Candidates for the MS degree may not get credit for a course taken longer than five years before the date on which the degree is to be granted.

Students who do not enroll for any course work relevant to computer science in a given semester (summer semesters excluded) must supply the Department of Computer Science and Engineering with a written statement describing the reason for the inactivity. Students who are inactive for three consecutive semesters (summer semesters excluded) will be removed from the program, and must re-apply for admission.

Graduate Education Policies and Procedures apply to this program.

## Program Requirements

Students need to submit an approved Plan of Study to the department during the first semester of their admission. An academic advisor will consult with students to develop a Plan of Study. Students may choose **Plan I** (Thesis), **Plan II** (MS Project), or **Plan III** (Course Only).

Both Plans I and II require successful defense of thesis or project in the student's graduating semester. Students completing Plan I and II should find a research advisor to sponsor their project before their second year of study.

- **Plan I-Thesis:** Students take 24 hours of graduate course work, and additionally write and defend a thesis, which counts for 6 hours of graduate thesis work. In this plan students will take a minimum of three "category A" courses, a minimum of three "category B" courses, and six hours of MS thesis (over a minimum of 2 semesters). Students are allowed a maximum of 6 credit hours of CS Independent Study with the approval of their faculty research advisor.
- **Plan II-MS Project:** Students take 27 hours of graduate course work, and additionally write and defend a MS project report, which counts for 3 hours of graduate MS project work. In this plan, students will take a minimum of three "category A" courses, a minimum of four "category B" courses, and three hours of MS project. Students are allowed a maximum of 3 credit hours of CS Independent Study with the approval of their faculty research advisor.
- **Plan III-Course Only:** Students must take 30 hours of graduate course work and, additionally, complete the final assessment during the student's graduating semester. In this plan, students will take a minimum of three "category A" courses and a minimum of four "category B" courses. One of the "category B" courses must be from a designated list of courses that will satisfy a final MS course project. Students are not eligible to complete CS Independent Study. Students can satisfy all 30 credits by taking all courses in Category A and B or elect to take the final credits in Category C. (For example; students completing their Software Engineering certificate.)

Students may take courses from Mathematics and other Engineering departments with prior approval of the CSE Graduate Committee.

No more than 6 credit hours may be in the form of online courses.