The Master of Science degree in computer science is a research-based option which permits graduate students the flexibility in defining specialized interdisciplinary fields that meet their professional needs. The research-based MS degree option is well-suited to students pursuing a career in academia or industry with a research component.

Students have two options under this degree. The Thesis Option, wherein students will have to complete six credits of MS thesis hours while working on a research problem and completing their thesis work. They work with a committee of three and have to defend their thesis. The Non-Thesis Option, wherein students will have to complete six credits of MS independent study research hours, while working on research projects with individual faculty. These six hours may or may not be with the same faculty.

With support from the research advisor, students in this program have the option of smoothly transitioning in the PhD program. If students receive support from a research advisor, they do not have to apply to the PhD program; the department processes the degree advancement based on the support.

Requirements

Degree Plans

While pursuing the traditional MS degree in CS, students may select between two options.

Plan I: Thesis Option

The MS thesis option curriculum is designed to provide a balance between modern technological focus and disciplinary depth. Students must secure a thesis advisor for research and course guidance.

Under this option, students complete 24 credits of coursework and 6 thesis credits at the 5000-level or above. At least 24 credits (eight courses) must be completed in computer science, including four required breadth courses. Up to 6 credits (two courses) may be taken outside of the department with the approval of the Graduate Committee.

In addition to this, students fulfill other MS degree requirements as stated by the department.

For more information, visit the Traditional MS Degree Program Requirements webpage.

Plan II: Non-Thesis Option

Under this option, students complete 24 credits of coursework at the 5000-level or above. At least 24 credits (eight courses) must be completed in computer science, including four required breadth courses. Up to 6 credits must be independent study research hours. Up to 6 credits (two courses) may be taken outside of the department with the approval of the Graduate Committee.

In addition to this, students fulfill other MS degree requirements as stated by the department.

For more information, visit the Traditional MS Degree Program Requirements webpage.

Breadth Courses

Students must complete one course each in four of the nine different breadth areas: artificial intelligence, computational biology, human-centered computing, numerical & scientific computing, programming languages, software engineering, database systems, systems & networking and theory of computing.

For a list of breadth courses by category, visit the department’s MS/ME Breadth Requirement webpage.

Time Limit

All degree requirements must be completed within four years of the date of commencing coursework.