

Structure of Program:

Students enrolled in the MS CS program can choose their courses from the following:

Semester of MS CS	Number of graduate CS courses available
1 st Semester (Fall)	2 core courses, 1 elective, thesis supervision
2 nd Semester (Spring)	1 core course, 2 electives, thesis supervision
3 rd Semester (Fall)	2 core courses, 1 elective, thesis supervision
4 th Semester (Spring)	1 core course, 2 electives, thesis supervision

Identification of courses with brief description and credit hours for each:

The MS in Computer Science is a 30 credit-hour program with an optional thesis track. All students must complete a 12-credit core of required courses. Students in the thesis track must take 12 additional credits of restricted electives and the 6-credit thesis sequence. Students choosing the non-thesis track must take 18 additional credits of restricted electives, 6 credits of which must be classified as project intensive.

The 12-credit core must be selected from the following list:

- CS 07.522 Advanced Theory of Computing (3 s.h.)
- CS 07.540 Advanced Design and Analysis of Algorithms (3 s.h.)
- CS 04.548 Programming Languages: Theory, Implementation and Application (3 s.h.)
- CS 07.523 Advanced Software Engineering (3 s.h.)
- CS 04.560 Design and Implementation of Operating Systems (3 s.h.)
- CS 06.520 Topics in Computer Architecture (3 s.h.)
- CS 06.510 Computer Networks (3 s.h.)
- CS 04.530 Advanced Database Systems: Theory and Programming (3 s.h.)

Available electives include the following existing Rowan University graduate level courses:

- CS 04.564 Compiler Design Theory (3 s.h.)
- CS 04.565 System Programming (3 s.h.)
- CS 04.570 Advanced Object Oriented Design (3 s.h.)
- CS 06.505 Wireless Networks and Systems (3 s.h.)
- CS 06.515 Embedded Systems Programming (3 s.h.)
- CS 06.520 Topics in Computer Architecture (3 s.h.)
- CS.07.545 Advanced Robotics (3 s.h.)
- CS 07.550 Concepts in Artificial Intelligence (3 s.h.)
- CS 07.555 Natural Language Processing (3 s.h.)

CS 07.556 Machine Learning (3 s.h.)
CS 07.560 Computer Graphics (3 s.h.)
CS 07.565 Computer Vision (3 s.h.)
CS 07.570 Introduction to Visualization (3 s.h.)
CS 07.575 Advanced TCP/IP and Internet Protocols and Technologies (3 s.h.)
CS 07.580 Computer Animation (3 s.h.)
CS 07.595 Advanced Topics in Computer Science (3 s.h.)

Any core course can be taken as an elective.

In addition students can choose no more than 6 credits of approved graduate electives from Electrical and Computer Engineering and Mathematics, and in the future from other departments which may offer pertinent graduate level courses.

Students choosing the thesis track must complete:

CS 07.530 Computer Science Thesis I (3 s.h.)
CS 07.531 Computer Science Thesis II (3 s.h.)

Project Intensive Designation

The course instructor may choose to designate a course as “project intensive.” Project intensive courses contain a significant project that contributes to the students’ final grade. Students choosing the non-thesis option must take at least two project intensive electives. The CS Graduate Program Coordinator will ensure that courses are designated as “project intensive” prior to registration periods and that students can register for the required 6 credits within the specified period of the program.

Sequence of course work

The course listed in section 4.4 will be scheduled so that students can complete in four semesters or in the case of a full-time student in three semesters. In the fall semester of each year there will be available: 2 core courses, 1 elective and thesis supervision. In the Spring semester of each year there will be available: 1 core course, 2 electives and thesis supervision.

Courses from other units in the institution

Students can choose no more than 6 credits of approved graduate electives from Electrical and Computer Engineering and Mathematics, and in the future from other departments which may offer pertinent graduate level courses.