# MS COMPUTER SCIENCE

## Program Learning Objectives

1. Prepared for successful careers in a computing-related field, including careers that involve positions of technical leadership and advanced responsibility
2. Exposed to a broad range of computer-science subjects in coursework that emphasizes technical subject matter.
3. Able to perform, analyze, evaluate and synthesize computer science research, in particular, know how to present research findings in oral and written form.
4. Prepared for life-long learning in the discipline of computer science, including continued formal graduate education.
5. Aware of the impacts of computing technology on society and understand ethics and responsible professional conduct.

The MS degree requires at least 45 units beyond the undergraduate degree. Courses must be chosen according to the following requirements:

| Select from the following: | | 20 |
|---|---|---|
| CSC 508 | Software Engineering I | |
| CSC 509 | Software Engineering II | |
| CSC 513 | Computing Education Research and Practice | |
| CSC 515 | Computer Architecture | |
| CSC 521 | Computer Security | |
| CSC 522 | Advanced Network Security | |
| CSC 524 | System Security | |
| CSC 530 | Languages and Translators | |
| CSC 540 | Theory of Computation II | |
| CSC 549 | Advanced Algorithm Design and Analysis | |
| CSC 550 | Operating Systems | |
| CSC 560 | Database Systems | |
| CSC 564 | Computer Networks: Research Topics | |
| CSC 566 | Topics in Advanced Data Mining | |
| CSC 569 | Distributed Computing | |
| CSC 570 | Current Topics in Computer Science | |
| CSC 572 | Computer Graphics | |
| CSC 580 | Artificial Intelligence | |
| CSC 581 | Computer Support for Knowledge Management | |
| CSC 582 | Computational Linguistics | |
| CSC 587 | Advanced Deep Learning | |
| **Thesis/Project and Seminar** | | |
| CSC 590 | Thesis Seminar | 1 |
| Select from the following: [1] | | 4 |
| CSC 596 & CSC 597 | Research in Computer Science I and Research in Computer Science II (2, 2) | |
| or | | |
| an additional 500-level course (4) [2] | | |
| CSC 599 | Thesis | 4 |
| **Electives** | | |
| Selected with Graduate Coordinator approval [2] | | 16 |
| **Total units** | | **45** |

[1] CSC 596 and CSC 597 must be taken before CSC 599.

[2] No more than 4-units total of CSC 500 allowed.

For further information or advisement students should communicate with the Graduate Coordinator of the Computer Science and Software Engineering Department.