

# Department of Computer Science and Information Systems

## Computer Science Master's Degree Plan

Non-Thesis Option – 11 courses and 595  
Thesis Option – 8 courses and 6 hrs of 518

Name \_\_\_\_\_ CWID \_\_\_\_\_  
(Last Name) (First Name)

Advisor \_\_\_\_\_

### Computer Science Prerequisites

Prerequisites do not count towards hours to complete degree.

\_\_ 515 Fundamentals of Programming C/C++

\_\_ 516 Computing Machine Organization

### Core Courses (required)

- \_\_ 520 Info Structures & Algorithm Analysis
- \_\_ 530 Operating Systems
- \_\_ 532 Algorithm Design
- \_\_ 540 Computer Architecture
- \_\_ 549 Automata Theory

### Required – one of the following

- \_\_ 595 Research Project
- \_\_ 518 Thesis (6 hrs)

### Electives

- \_\_ 528 Object Oriented Programming
- \_\_ 531 Java Programming
- \_\_ 542 Microcomputer Instrument and Control
- \_\_ 552 Advanced Micro-controller Electronics
- \_\_ 546 Numerical Analysis
- \_\_ 569 Image Analysis and Recognition
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

### Track Emphasis (must complete at least one track) Track courses can be taken as electives

#### Database

- \_\_ 526 Database Systems
  - \_\_ 527 Advanced Databases
  - \_\_ 556 Data Analysis & Visualization
  - \_\_ 573 Big Data Computing & Analytics
- (Completion of three courses required)

#### Computer Networks

- \_\_ 525 Networking I Local Area Networks
- \_\_ 534 Networking II Routers
- \_\_ 553 Networking III Unix Based Networks

#### Information Security

- \_\_ 563 Information Security
- \_\_ 568 Cryptography
- \_\_ 581 Computer and Network Security

#### Artificial Intelligence

- \_\_ 538 Artificial Intelligence
  - \_\_ 560 Neural Networks
  - \_\_ 567 Image Processing w/ Applications
  - \_\_ 574 Machine Learning
- (Completion of three courses required)

Master's Comprehensive Exam: Each student must pass the Master's Comprehensive Exam. This exam is given during the Fall and Spring semesters and it is the responsibility of the student to register for the test with the department.

Comprehensive Exam: \_\_\_\_\_ (Pass/Fail) \_\_\_\_\_ (Pass/Fail) \_\_\_\_\_ (Pass/Fail)

Student: \_\_\_\_\_ Date: \_\_\_\_\_

Advisor: \_\_\_\_\_ Date: \_\_\_\_\_