Department of Computer Science and Information Systems
Computational Science (CPSI) Master's Degree Plan (effective starting Fall'18)

Non-Thesis Option: 30 SCH course work and 3 SCH of CSCI 507 and 3 SCH of CSCI 508
Thesis Option: 24 SCH course work and 6 SCH of CSCI 518.

Name: _____ CWID: _____
(Last Name) (First Name)

Email:_____ Advisor: _____

Computational Science Prerequisites

Prerequisites do not count towards hours to complete degree. Fill in your grades next to the course, sign, and give to your advisor.

__ CSCI 515 Fundamentals of Programming C/C++ __ CSCI 502 Statistics for Scientific Computation & Analysis

_____(Passed/Waived? Semester) _____(Passed/Waived? Semester)
(Advisor signature required) (Advisor signature required)

Core Courses (required)
__ CSCI 509 Intro Computational Science
__ CSCI 532 Algorithm Design
__ CSCI 549 Automata Theory
__ CSCI 574 Machine Learning

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

Track 1: Computational Linguistics

(6 Semester Hours) See also Comp. Ling. Certificate
__ ENG 555 General Linguistics
__ ENG 685 Computational Linguistics

Track 2: Computational Business Analytics

(6 Semester Hours)
__ BUSA 501 Intro Business Analytics
__ BUSA 542 Applied Decision Modeling

Track 3: Computational Biology

(6 Semester Hours)
__ BSC 504 Quantitative Biology
__ CSCI 570 Bioinformatics Algorithms

Required (one of the following)
__ CSCI 507 (3 hrs) and CSCI 508 (3 hrs) CPSI Internships
__ CSCI 518 Master's Thesis (6 hrs)

Recommended Electives*

__BSC 513 Molecular Genetics
__ BSC 519 Advanced Gene Regulation
__ BSC 526 Developmental Biology
__ BUSA 523 Business Analytics Programming
__ BUSA 537 Advanced Analytics
__ ECO 578 Statistical Methods
__ ENG 686 Quant. Methods for Linguists
__ ENG 697 Special Topic
__ MATH 536 Cryptography
__ MATH 546 Numerical Analysis
__ MATH 561 Regression Analysis & Design of Exper.
__PHYS 513 Computational Physics
__PHYS 517 Mathematical Methods in Physics
__ PHYS 572 Parallel Computing
__ PSY 511 Cognitive Science
__ PSY 620 Introduction to Human Cognition
__ PSY 626 Cognition and Instruction II
__ PSY 645 Introduction to Learning Technology
__CSCI 556 Data Analytics and Visualization
__CSCI 560 Neural Networks and Deep Learning
__CSCI 567/Math 563 Image Processing with Elements of Learning
__CSCI 569/Math 569 Image Analysis and Recognition with Learning
__CSCI 573 Big Data Computing & Analysis
__ CSCI 575 Cyber-physical Systems and Industrial IOT

Any regular graduate CSCI course can also be taken as electives with faculty advisor approval

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. For students who are doing the MS thesis option, the final thesis defense before the faculty committee constitutes the student's comprehensive exam.

Comprehensive Exam: (1) Coordinator: _____ Semester: _____(Pass/Fail)
(2) Coordinator: _____ Semester: _____(Pass/Fail)
(3) Coordinator: _____ Semester: _____(Pass/Fail)

Student: _____ Date: _____

Advisor: _____ Date: _____

One copy will be maintained in the CS Dept. Changes must be done with timely approvals, this is the student's responsibility. This version is effective Fall 2016.

Notes:

1. *Clearance of prerequisite courses:* The prerequisite courses of CSCI 515 and CSCI 502 may be waived if one passes the prerequisite deficiency tests/exams that are usually held on and/or before during the orientation week (i.e., the weeks prior to the first week of classes). The first semester of studies is a student's only chance to take the deficiency exams. The prerequisite courses are required for any student who are not waived during the first semester in the program, and the student is not allowed to drop the prerequisite courses.
2. *Comprehensive exam:* To complete the degree, one pursuing the non-thesis option should pass the comprehensive exam that is offered twice a year in Fall and Spring semesters. Officially there are two chances to take the comprehensive exam; the third attempt may be given upon the department consent by processing the "3rd attempt" form.