

# CSCI-MS

## Graduate Track/Specialty Area

### Worksheet

Name of Track: Algorithms and Theoretical Computer Science

Faculty Member(s) using track: Ian Parberry, Robert Renka, Farhad Shahrokhi

**Required Courses for all Tracks:** 4 credits (Algorithms and 1-hour seminar course) are required for all tracks.

Course Number	Course Name	Credits	Semester Taken
<b>CSCE 5020</b>	Current Research in CSE	1	
<b>CSCE 5150</b>	Analysis of Computer Algorithms	3	

**Track Core Courses:** Each track will require a minimum of 9 credits to be chosen from a list of at least 3 courses. This list may include specific courses that students must take, provide a choice between a short list of courses, or any combination thereof.

Core Courses Required: 3

Course Number	Course Name	Credits	Semester Taken
<b>CSCE 5160</b>	Parallel Processing and Algorithms	3	
<b>CSCE 5170</b>	Graph Theory for Computer Scientists (required)	3	
<b>CSCE 5400</b>	Automata Theory (required)	3	
<b>CSCE 6100</b>	Theory of Computation	3	

**Track Supporting Courses:** Tracks are expected to provide a list of supporting courses. Tracks may require a student to take courses from the supplemental list based on the following:

- *for thesis option:* The maximum number of required courses across the track (**core and supporting**) should not exceed 15 credits (not including thesis). For MS with thesis, the total number of hours required is 31. This leaves a minimum of 6 credit hours free for the student to choose. One 6000 level course must be included on your degree plan.
- *for course option:* The maximum number of required courses across the track (**core and supporting**) should not exceed 21 credits. For MS without thesis, the total number of hours required is 37. This leaves a minimum of 12 credit hours free for the student to choose. One 6000 level course must be included on your degree plan.

Supporting Courses Required: 2/2 (may include core courses not selected)

Course Number	Course Name	Credits	Semester Taken
<b>CSCE 5212</b>	Foundations of Logic Programming	3	
<b>CSCE 5213</b>	Modeling and Simulation	3	
<b>CSCE 5230</b>	Methods of Numerical Computation	3	
<b>CSCE 5650</b>	Compiler Design	3	
<b>CSCE 6150</b>	Complexity of Parallel Computation	3	
<b>CSCE 6480</b>	Computability	3	

Total Required Courses for Track/Specialty Area: 5/5