CMPE-MS
Graduate Track/Specialty Area

Name of Track: **Communication and Networks**

Faculty Member(s) using track: **Robert Akl, Ram Dantu, Armin Mikler**

Required Courses for *Communication and Network* Tracks: *9 credits (must include the core course 5510/5580)*

Course Number	Course Name	Credits	Semester Taken
CSCE 5510	**Wireless Communications (core course)**	3	
CSCE 5520	Wireless Networks and Protocols	3	
CSCE 5530	Computer Network Design	3	
CSCE 5540	Introduction to Sensor Networks	3	
CSCE 5580	**Computer Networks (core course)**	3	
CSCE 6581	Advanced Computer Networks	3	
CSCE 6590	Advanced Topics in Wireless Communications and Networks	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. To qualify for the master's degree, a student must earn a grade of "B" or better in each of the core and required courses.*

Other Core Courses Required: **2**

Course Number	Course Name	Credits	Semester Taken
CSCE 5610	Computer System Architecture (core course)	3	
CSCE 5640	Operating System Design (core course)	3	
CSCE 5730	Digital CMOS VLSI Design (core course)	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 30. This leaves a minimum of 6 credit hours free for the student to choose.*
- *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 36. This leaves a minimum of 15 credit hours free for the student to choose.*
- *Only one CSCE 5934 Directed Study course is permitted and CSCE 5932 Internship course may not be included on the degree plan. To continue in good standing, a student must maintain a 3.0 GPA overall.*

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

Course Number	Course Name	Credits	Semester Taken
CSCE 5160	Parallel Processing and Algorithms	3	
CSCE 5440	Real-Time Software Development	3	
CSCE 5450	Programming Languages	3	
CSCE 5620	Real-Time Operating Systems	3	
CSCE 5650	Compiler Design	3	
CSCE 5740	Topics in Modern Electronics Systems Design	3	
CSCE 5760	Design for Fault Tolerance	3	
CSCE 5910	Special Problems	3	
CSCE 5934	Directed Study	3	
CSCE 6610	Advanced Computer Architecture	3	
CSCE 6620	Advanced Real-Time Operating Systems	3	

Total Required Courses for Track/Specialty Area: **7/7**