MS IN COMPUTING:
NETWORKED SYSTEMS

A student may pursue an MS with (1) a thesis option, (2) a project option, or (3) a course-only option. The minimum number of credit hours required for all the three options is 30. These credit hours must be from graduate level courses only. Students must take all of the three required courses listed below, and any four courses from the elective list below.

Students selecting the thesis option must include a minimum of 6 (up to a maximum of 9) MS Thesis Research (CS 6970) credits in their program of study. Students selecting the thesis option may include at most 3 credits of Independent Study (CS 6950) on their program of study, and may only do so if the work done in the Independent Study does not overlap with the student's thesis work, as determined by the student's supervisory committee. If work done for an independent study turns into thesis work, the Independent Study credits can be converted to MS Thesis Research (CS 6970) credits.

For students selecting the project option, exactly 6 credits of Independent Study (CS 6950), covering the student's project work, must be included in the program of study. For students selecting the coursework option, Independent Study (CS 6950) can be included in the program of study for at most 3 hours.

TRACK FACULTY
Tamara Denning, Eric Eide, Ganesh Gopalakrishnan, Mary Hall, **Sneha Kasera (Track Director),** Feifei Li, Neal Patwari, John Regehr, Robert Ricci, Ryan Stutsman, Jacobus Van der Merwe, Suresh Venkatasubramanian

COURSE REQUIREMENTS The following 3 courses are required:	
CS 6480	Advanced Computer Networks
CS 6490	Network Security
CS 6956	Wireless and Mobile Networks

A minimum of a B or greater is required for any of the required courses.

ELECTIVES At least 4 elective courses must be taken from the following list:	
CS 6110	Formal Methods in Systems Design
CS 6150	Advanced Algorithms
CS 6235	Parallel Programming for GPUs/Many Cores/Multi-Cores
CS 6460	Operating Systems
CS 6530	Database Systems
CS 6810	Computer Architecture
CS 6957	Software Defined Network Architecture
CS 6963	Distributed Systems
CS 6964	Computer Security Research

PHD IN COMPUTING:
NETWORKED SYSTEMS

Course work listed on the approved Program of Study form must comprise at least 50 semester hours of graduate course work and dissertation research. Up to 3 credit hours of an Independent Study (CS 6950) can be included in the Program of Study. At least 14 semester hours of dissertation research (CS 7970) and 27 semester hours of graduate course work must be included. Up to 20 hours of graduate level course work already applied to other degrees may be used in the program of study as approved by the track director.

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COURSE REQUIREMENTS The following 3 courses are required:	
CS 6480	Advanced Computer Networks
CS 6490	Network Security
CS 6956	Wireless and Mobile Networks

PhD students must demonstrate core knowledge in networked systems by passing three specied courses, prior to the start of their fifth semester of study, with grades of B or better in each course and an overall GPA in the specied courses of at least 3.5.

A student must take five elective courses (fifteen hours) which are related to the general area of networking or are directly applicable to the student's dissertation research. Up to two courses (six hours) may be taken from other departments at the University of Utah. All elective courses on the Program of Study must be taught at the graduate level. All courses taken by a track student to fufilll the elective requirements must be approved by the student's committee and the track director.

ELECTIVES At least 4 elective courses must be taken from the following list:	
CS 6110	Formal Methods in Systems Design
CS 6150	Advanced Algorithms
CS 6235	Parallel Programming for GPUs/Many Cores/Multi-Cores
CS 6460	Operating Systems
CS 6530	Database Systems
CS 6810	Computer Architecture
CS 6957	Software Defined Network Architecture
CS 6963	Distributed Systems
CS 6964	Computer Security Research
Additional CS graduate level courses may be required to meet the 50 credit hour program of study requirement.	