

ASSESSMENT MATRIX



PROGRAM OR SCHOOL	M.S. Telecommunications		
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Program or School Mission Statement	To educate people for professional positions in the global Telecommunications industry, to provide curricular leadership for the evolving Telecommunications discipline, to provide useful research for the Telecommunications field, and to serve the Telecommunications profession.		
Program or School Goals	<ul style="list-style-type: none"> • Proficiency in theory and application: A broad understanding of telecommunications and networking including knowledge of theoretical foundations, protocols, design, policy, and regulatory issues • Specialized professional knowledge: Develop professional knowledge specialized for sub areas of telecommunications such as for managing networks, assuring network security, or in wireless communications 		

Learning Outcomes <i>What will students know and be able to do when they graduate?</i>	Assessment Methods <i>How will the outcome be measured? Who will be assessed, when, and how often?</i>	Standards of Comparison <i>How well should students be able to do on the assessment?</i>	Interpretation of Results <i>What do the data show?</i>	Use of Results/Action Plan <i>Who reviewed the finding? What changes were made after reviewing the results?</i>
1) Theory: Students will apply theoretical principles of performance analysis demonstrating their ability to design or evaluate a network for its ability to support an application or solving a telecommunications networking problem	One faculty member will examine a representative sample of final student projects or papers from the required “Network Performance” course annually using a faculty-developed rubric: 1. Exceeds expectations 2. Meets expectations 3. Does not meet expectations	80% of the sampled projects or papers will meet or exceed expectations in demonstrating a working knowledge of network architectures, protocols, and basic processes of performance analysis of networks.	Based on evaluation of seven student group projects collected from the Fall 2011 Network Performance class all seven class projects meet or exceed expectations. In particular two exceeded expectations and five met expectations.	The data was reviewed by Professor Konstantinos Pelechrinis and will be shared with the faculty and Dean and the Industrial Advisory Board at upcoming meetings.
2) Theory and Practice: Students will apply their knowledge of computer networks to analyze network traffic and develop applications making use of sockets and network programming	One faculty member will examine a representative sample of student projects or papers from the required “Computer Networks” or equivalent course annually using a faculty-developed rubric:	80% of the sampled projects will meet or exceed expectations in demonstrating a working knowledge of network traffic analysis and client-server programming.	Based on individual student mini-projects and exams collected from the Fall 11 Computer Networks class 14 students exceed expectations, and one meets expectations.	The data was reviewed by the program chair and will be shared with the faculty and Dean and the Industrial Advisory Board at upcoming meetings. The faculty will consider an upward revision of expectations and course projects.

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	<ol style="list-style-type: none"> 1. Exceeds expectations 2. Meets expectations 3. Does not meet expectations 			
3) Practice: Students will demonstrate ability to identify and work with telecommunications equipment and software	<p>One faculty member will examine a representative sample of student quizzes and lab reports from the required “Computer Networking Laboratory” course annually using a faculty-developed rubric:</p> <ol style="list-style-type: none"> 1. Exceeds expectations 2. Meets expectations 3. Does not meet expectations 	<p>80% of the sampled quizzes and/or laboratory reports will meet or exceed expectations in appropriately configuring and using telecommunications equipment and software tools.</p>	<p>Based on individual student lab reports and exams collected from the Spring 2012 Computer Networking Laboratory course 6 students exceeded expectations, 6 meet expectations and 3 (20%) of the did not meet expectations.</p>	<p>The data was reviewed by the program chair and will be shared with the faculty and Dean and the Industrial Advisory Board at upcoming meetings. The lab is under going a revision</p>
4) Specialization: Students will demonstrate proficiency in an elective telecommunications specialization: <ul style="list-style-type: none"> • Explain and critique specific emerging issues in wireless networking protocols, architectures and/or devices, or • Explain specific network security risks, implement or evaluate performance of cryptographic algorithms, or demonstrate understanding of network security protocols and architectures 	<p>One faculty member will examine a representative sample of MST student projects or final exams from a subset of the elective courses – TELCOM 2700/2720, TELCOM 2820/2821 using a faculty-developed rubric:</p> <ol style="list-style-type: none"> 1. Exceeds expectations 2. Meets expectations 3. Does not meet expectations 	<p>80% of the sampled projects or final exams will meet or exceed expectations in demonstrating proficiency in areas of wireless communications or network security.</p>	<p>Based on final exams and individual/group student projects collected from the Fall 11 TELCOM 2700 Wireless Networks course all fourteen students projects meet or exceed expectations.</p> <p>Similarly, based on the Fall 11 TELCOM 2820 Cryptography exams the performance of all fifteen students projects meet or exceed expectations.</p>	<p>The data was reviewed by the program chair and will be shared with the faculty and Dean and the Industrial Advisory Board at upcoming meetings.</p>
5) Long Term Success: MST alumni will be employed and successful in their first and subsequent	<ol style="list-style-type: none"> 1. Graduates will be polled in exit interviews. 2. Members of the Telecommunications 	<ol style="list-style-type: none"> 1. 80% of surveyed MST graduates will be professionally employed within one year of 	<p>Based on the survey of Spring 2011 and Fall 2011 graduates, 19 of 20 graduating students were</p>	<p>The data will be reviewed by the program chair and will be shared with the faculty and Dean, student recruitment services and the Industrial</p>

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professional positions following graduation.	Industrial Advisory Committee (IAC) will report on the progress of SIS graduates 3-5 years after being hired into their organizations.	graduation. 2. 90% of MST graduates employed by Tele IAC member organizations will meet or exceed employer expectations.	employed in the field with and one student pursuing a Ph.D. A survey of employers has not been conducted due in part to the difficulty in tracking alumni	Advisory Board at upcoming meetings.
6) Global Competence: MST students will demonstrate the ability to identify the international dimensions and adapt the practice of telecommunications to different cultures	One faculty member will examine a representative sample of student papers from the required “Telecommunications Seminar” course annually starting in 2012 using a faculty-developed rubric: 1. Exceeds expectations 2. Meets expectations 3. Does not met expectations	75% of the sampled papers will meet or exceed expectations in demonstrating proficiency in areas of global competency.	The global competence will be evaluated starting Fall 2012.	The data will be reviewed by the program chair and will be shared with the faculty and Dean, student recruitment services and the Industrial Advisory Board at upcoming meetings