ASSESSMENT MATRIX

PROGRAM OR SCHOOL	M.S. Telecommunications		
Assessment Coordinator for Program or School	**Name:** David Tipper	**Email:** tipper@tele.pitt.edu	**Phone:** 624-9421
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	• **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 *What will students know and be able to do when they graduate?*	Assessment Methods *How will the outcome be measured? Who will be assessed, when, and how often?*	Standards of Comparison *How well should students be able to do on the assessment?*	Interpretation of Results *What do the data show?*	Use of Results/Action Plan *Who reviewed the finding? What changes were made after reviewing the results?*
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 group student projects collected from the Fall 09 Network Performance class all four class projects meet or exceed 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.
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: 1. Exceeds expectations 2. Meets expectations 3. Does not meet	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 09 Computer Networks class 16 of 17 students meet or exceed 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.

Learning Outcomes *What will students know and be able to do when they graduate?*	Assessment Methods *How will the outcome be measured? Who will be assessed, when, and how often?*	Standards of Comparison *How well should students be able to do on the assessment?*	Interpretation of Results *What do the data show?*	Use of Results/Action Plan *Who reviewed the finding? What changes were made after reviewing the results?*
	expectations			
3) Practice: Students will demonstrate ability to identify and work with telecommunications equipment and software	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: 1. Exceeds expectations 2. Meets expectations 3. Does not meet expectations	80% of the sampled quizzes and/or laboratory reports will meet or exceed expectations in appropriately configuring and using telecommunications equipment and software tools.	Based on individual student lab reports collected from the Fall09 Computer Networking Laboratory all eight reports meet or exceeded 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.
4) Specialization: Students will demonstrate proficiency in an elective telecommunications specialization: • 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	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: 1. Exceeds expectations 2. Meets expectations 3. Does not meet expectations	80% of the sampled projects or final exams will meet or exceed expectations in demonstrating proficiency in areas of wireless communications or network security.	Based on final exams and individual/group student projects collected from the Fall 09 Wireless Networks course all students meet or exceed expectations. Similarly, based on the Spring 09 Network Security exams the performance of all nine students meet or exceed 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.
5) Long Term Success: MST alumni will be employed and successful in their first and subsequent professional positions following graduation.	1. Graduates will be polled in exit interviews. 2. Members of the Telecommunications Industrial Advisory Committee (IAC) will	1. 80% of surveyed MST graduates will be professionally employed within one year of graduation. 2. 90% of MST graduates	No data was obtained at this point of time – the exit interview/survey is on-going for Spring 2010 graduates. However, 6 of 19 graduating students have already	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.

Learning Outcomes *What will students know and be able to do when they graduate?*	Assessment Methods *How will the outcome be measured? Who will be assessed, when, and how often?*	Standards of Comparison *How well should students be able to do on the assessment?*	Interpretation of Results *What do the data show?*	Use of Results/Action Plan *Who reviewed the finding? What changes were made after reviewing the results?*
	report on the progress of SIS graduates 3-5 years after being hired into their organizations.	employed by Tele IAC member organizations will meet or exceed employer expectations.	accepted employment. We will conduct an employer survey in the future.	

The Assessment Matrix is based on the University of Virginia Assessment Matrix Template