

**Observations by the Dean, Associate Dean, SIS Council Chair, and Program Chairs
(BSIS, GIST, [TeleNet](#), LIS)**

Telecommunications and Networking Program Talking Points

- 1. Changes in the Program over the past 5 years driven by or related to assessments.**
 - a. As a result of industrial advisory board recommendations and self assessment the Telecommunications and Networking program changed emphasis to focus on supporting the undergraduate BSIS program and strengthening the Ph.D. program. Additionally we have developed closer ties with the MSIS program.
 - b. Major curricular changes have been made as follows.
 - BSIS: Introduction/revision of courses to support security analyst and network analyst pathways in the degree
 - MST: Introduction of laboratory course, seminar course, security track courses, reduction and consolidation of physical layer communications and telephony courses. Agreement to expand course offerings from Katz school of business.
 - PhD: Introduction of core set of courses for all Ph.D. students, changes in preliminary exam and comprehensive exam to better support research, intentional reduction in enrollment and efforts to raise quality of doctoral students.
 - MSIS: Introduction and support of security track courses and telecommunications and distributed systems track courses.
 - MLIS/MSIS/Tele: Development and introduction of Network Science course with applications to social networks and web science – jointly taught with LIS

- 2. Exogenous trends that have impacted or influenced the changes that have been made.**
 - a. Industry hiring trend towards skills in converged communications, network automation/management, applications, wireless networks and security.
 - b. Transformation of Pitt to research focused university
 - c. Federal research funding in core networking areas has decreased, along with decline in industrial sources of research funding.
 - d. Federal research funds increasingly being directed to larger scale, multidisciplinary projects that require collaborative teams of researchers in multiple departments, schools, and universities.
 - e. Greater emphasis on US citizenship in job placement combined with increased immigration requirements makes attracting international students more difficult.

- 3. Dominant challenges and risks to TeleNet program that is informed or driven by current assessments.**
 - a. Faculty size affects administrative load and ability to meet curricular demands.
 - b. Exit interviews indicate student demand for additional lab experience, internships, placement help and closer research mentoring.
 - c. Expense in maintaining lab.
 - d. Maintaining and building research funding for doctoral program.

- 4. Notable opportunities that have become apparent as a result of current assessments.**
 - a. Expanding relevance to ISchool vision with research and curricular linkage to efforts in others program on security, GIS, data management, social networks, complex and adaptive systems.
 - b. Opportunity to restructure IT staff to support Telecommunications lab.

- 5. Potential scenarios that suggest alternative futures for the Telecom program, that offer insight into the School's 5-year prognosis and contribute to its vision.**

Optimistic scenario; Job growth in Telecom sector increases as predicted by BLS and others, attract substantial number of students that are US citizens to degree programs, expand undergraduate offerings to BS IS. Hire full time lab manager /internship/placement staff person. Fully fund all Ph.D. students from research grants with government and corporate support. Signature research focus developed with contributions from all faculty members.

Pessimistic scenario; Employment market becomes sluggish, MST degree discontinued due to low enrollment and reliance on international students, Ph.D. program size reduced to only students that can be supported by GSAs.