

FY2008 DEPARTMENTAL ANNUAL REPORT OF CONTINUOUS IMPROVEMENT

Department of Information Networking and Telecommunications Fort Hays State University

I. Departmental Overview

The Department of Information Networking and Telecommunications (INT) offers working and academic concentrations: Media Studies, Computer Networking and Telecommunications, and Web Development. Both the Bachelors of Science and the Bachelors of Arts degrees provide extensive theoretical, hands-on and cutting-edge technology experience. The department offers a concentration in the Bachelors of General Studies and in the Masters of Liberal Studies. The department also offers three certificates.

The INT department emphasizes balanced development of technical, analytical, communication, and leadership skills in order to open long-term career options. Information Networking focuses on the concept of the effective use and movement of information. Students in Media Studies and Web Development learn to become the content creators for the media of today and tomorrow. Telecommunications/Networking students learn to create the high powered networks that deliver electronic content. All INT students learn critical skills used to apply information in powerful ways for business, government, education, health care, entertainment and other sectors.

A. Departmental Mission and Vision Statements

Mission Statement

The following is the mission statement as it appeared in the Proposal to Establish a Department of Information Networking and Telecommunications as submitted to the Kansas Board of Regents.

The mission of the Department of Information Networking and Telecommunications is:

- (1) to develop and maintain a curricular program based on the converging broadcast, computer, and telecommunications industries and areas of study
- (2) to foster a liberal arts philosophy in all courses and degree programs within the discipline.
- (3) to initiate and maintain relationships between the various broadcast, computer and telecommunications industries and INT for the development of internship and apprenticeship opportunities.
- (4) to posture the department as a leader in information technologies for the purpose of promotion technology development and utilization in the state of Kansas
- (5) to employ a multidisciplinary approach to instruction by developing a challenging curriculum that is practical and applicable to multidimensional market needs

Vision Statement

The Program in Information Networking and Telecommunications at Fort Hays State University

I. Rationale

The “Powershift” Argument: Positioning is Everything

In Powershift, Alvin Toffler’s third work in his impressive and sweeping trilogy on the concept of worldwide change, he argues that the very nature of power is undergoing a dramatic transformation. This transformation is the product of an accelerating and increasingly pervasive system of wealth creation which finds its origins in the relationship between knowledge and power. The fusing of these two elements is energized by the driving forces of individualism, innovation and information.

Information, the most instrumental, is causing shifts of power not only at the global level but throughout our daily existence including “the world of supermarkets and hospitals, banks and business

offices, television and telephones, politics and personal life” (Toffler, 1990). If we are truly entering an era of shifting power based on the potential of information to create knowledge, and thus a new system of wealth and control, **the future belongs to those who can effectively access, distribute, and process information.**

Any lack of preparedness or positioning is limiting and potentially dangerous in a world where the creation of wealth is becoming ever more dependent on the management of an information-related agenda of issues and the availability of first-rate telecommunications facilities and services.

Although infrastructure for accessing information is critical, ultimate success in this global system of wealth creation is tied to **human capital**. As we prepare ourselves to function in the “new economy” of the 21st century, our destiny depends on information networking and knowledge-processing skills and capacities. Just as Tocqueville observed in 1832 in his treatise Democracy in America, *the future rests heavily on public and innovation in education and training.*

The Regents System and Fort Hays State University

The Kansas Regents System has a critical role to play in developing a broadly-educated workforce to meet the knowledge-processing needs of this evolving global system of wealth creation. As the university in the Regents System assigned the mission of applying computers and communications-technology to liberal arts education, Fort Hays State University (FHSU) is well positioned to contribute positively and effectively to the concept of lifelong learning in the new information-based economy. To capitalize on the university’s position and the emerging opportunity to assume a leadership role in education for the Information Age, the university has developed new and unique degree programs in Information Networking and Telecommunications.

II. The Vision

There is a popular saying among strategic planners and purveyors of new leadership paradigms such as “liberation management” which goes something like this—*a vision is a journey, not a destination*. In essence, what they mean is that no matter how comprehensive or well-defined, visions are simply reservoirs along a stream of continuous quality improvement. As reservoirs, however, they represent inspirational and thought-provoking holding basins for the brainstorming of dreamers and, at times, lunatics.

Definition of Terms

- A) *Information networking*, a complex field, is defined simply and clearly as the *movement and use of information*.
- B) *Telecommunications* is “sharing at a distance” with a focus on public and private access and transmission technologies, switching systems and storage and processing devices designed to facilitate information networking across barriers and boundaries.

Some Key Elements of the Vision

Mission The program's primary mission will be to produce information networking managers, leaders, government officials and citizens who can effectively contribute to the success of the state's telecommunication industry and other existing and emerging forms of economic, social and political organization conditioned by the information world of the 21st century.

Curriculum The program's courses are built on a multidisciplinary foundation, drawing on faculty and experts from the fields of:

- Technology
- Business and Organizational Management
- Public Policy
- Social Theory, Communication and Leadership

It draws on resources from the Colleges of Arts and Sciences, Business and Education.

Courses will be offered for a cohesive learning experience from lower division through a senior seminar, along with involvement in the Masters of Liberal Studies program. *Technology* courses focus on the technical means to store, display, retrieve, process and transmit information with emphasis on the needs of the end user of the information, whether the user is an individual, an organization or an institution.

Management and leadership courses treat the specific management problems associated with information development, movement and use.

Policy courses examine the policy implications of information networking and telecommunications for individuals, organizations and the concerns of local, regional, national and global entities.

Social theory, communication and other liberal arts courses provide students with an appreciation and sensitivity for the political and societal implications and impact of information networking and technology.

Interactivity/Outreach

The program's co-curricular, extracurricular and public outreach activities and arrangements provide linkages and opportunities in the following areas:

- Ties to university, local and state economic development efforts
- Opportunities for students to partake in service learning that provide students an opportunity to use their unique skills for the benefit of others and to develop a sense of their abilities to make a positive impact.
- Ties to the American Democracy Project – helping to promote and to disseminate information about the project through communication channels such as television programming, news stories, PSA creation, and website development.
- Ties to state, national and global information networking and telecommunications industries/Corporate partnerships
- Local, state and regional strategic planning efforts
- Grant opportunities and access to worldwide experts (visiting lectures, speakers, researchers, etc.)
- Enhanced student involvement in the form of internships, apprenticeships and special appointments in the world of information networking and telecommunications
- Strengthening the university’s commitment to TQM by producing information networkers and navigators who are broadly-educated and appreciate teamwork and the need for lifelong learning
- The potential for recruiting students and faculty on a regional and national level based on unique and innovative programming

III. The Outcome

The authors of Integrity in the College Curriculum (1985) pulled no punches when they described the deficiencies of the typical undergraduate major. In their words...“the major in most colleges is little more than a gathering of courses taken in one department, lacking structure and depth.” Subsequent reports from several higher education associations have echoed this statement.

FHSU has addressed this criticism and infused its own learning community with an innovative structure and set of programming arrangements designed to produce a special kind of graduate, or what Jay Gillette has referred to as the “T”-person. Because information networking is a multidisciplinary field, it requires the attention and participation of people who are more than telecommunications technicians. At a minimum, the information networking manager or government official responsible for telecommunications should have background or expertise in technology, business management and public policy (Gillette, 1991). This “T”-person has skills and technical proficiency not only in *depth*,

but develops *breadth* by networking with other people and disciplines to gain expertise in business and the formulation of public policy. The Bellcore Information Networking Institute has identified an additional set of attributes which the “T”-person and knowledge workers should possess (Gillette, 1991):

- A) *Strategy-minded* (they see the big picture including the political, social and economic context of which they are a part)
- B) *Creative/Flexible* (they analyze problems from a fresh perspective)
- C) *Innovative/Adaptive* (they are knowledgeable about new technologies and how to deploy them)
- D) *Persistent* (they go the extra mile, don’t give up and pay attention to detail)
- E) *Cooperative* (they are team players and able to see the end-client’s point of view)
- F) *Competitive/Desire to Improve* (they are aware of marketplace dynamics and organizational realities; they stay ahead of change by initiating change)
- G) *Knowledgeable* (they use theories about the nature and behavior of information to manage its movement and use in a networked society)

In summation, the FHSU program in Information Networking and Telecommunications is designed to reflect an emphasis on liberal learning in an information economy. As a component of liberal learning, the department’s offerings will be aimed at equipping students with the “freedom” to realize their potential in the knowledge-intensive world of the 21st century. Understanding the implications of information technology, information networking management and telecommunications public policy will contribute to that potential.

IV. References

Association of American Colleges. (1985). *Integrity in the college curriculum: A report to the academic community [of] the findings and recommendations of the Project on Redefining the Meaning and Purpose of Baccalaureate Degrees*. Washington, DC: Association of American Colleges.

Gillette, Jay, ed. (1991). *Contributions in information networking: Toward a field definition*. Morristown, NJ: Bellcore Information Networking Institute.

Toffler, Alvin. (1990). *Powershift: Knowledge, wealth, and violence in the 21st century*. New York: Bantam Books.

B. Departmental Goals, Objectives, and Strategic Priorities

The INT Department has established departmental Meta Goals for a five year Period 2005 – 2010. These are major multi-year goals. They include:

- Obtain designation as a Center of Academic Excellence in Information Assurance

- Continued on-campus traditional student growth and improvement of qualifications of incoming students.
- Greater footholds in major metropolitan areas for recruitment of traditional students
- Maintain Kansas Cisco Networking Academy System
- International enrollment (controlled growth)
- Expanded military enrollment (controlled growth)
- 450 undergraduates split among tracks and between on-campus and Virtual College
- 100 graduate students
- Full Masters of Science – perhaps shared with other FHSU IT departments offered through the Virtual College – 90% distance learning students, 10% on-campus; enhanced tuition (w/qualified admission policy)
- More faculty (also PhD faculty)
- Endowed incentive system for faculty performance
- Endowed scholarships \$500,000
- Enhance faculty research and scholarship that enhances undergrad education
- New building facilities pulling the INT Department into one building with adequate offices, labs, studios, and work areas.

Five Year Vision (2011)

<p>More faculty International Military (controlled growth) 450 undergrads (even split among tracks) 50 graduates Full Grad Degree On-Line – 90% on-line students, 10% on-campus; enhanced tuition (with qualified admission policy) Endowed incentive system Endowed scholarships \$500,000 Enhanced scholarship that enhances undergrad education</p>
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II. DEPARTMENTAL HIGHLIGHTS

A. Department Productivity and Distinctive Accomplishments

The Department of Information Networking and Telecommunications successfully received 100% certification from the National Committee on National Security Systems for its 4011 and 4013E standards. This certification is for a five year period. Many universities take multiple attempts to receive curriculum certification. Most are required to provide additional information or to provide responses to questions after submission of curriculum mapping. FHSU INT received glowing reviews from the curriculum review team which had no questions or requirements for clarification. The University received a ceremonial certificate during the CNSS Awards Ceremony at the 12th Colloquium for Information Systems Security Education on June 4, in Richardson, Texas.

The Department of Information Networking and Telecommunications was named the “Outstanding Undergraduate Program of the Year” by the International Telecommunications Education and Research Association on March 28 in Louisville, Kentucky.

Students and alumni were hired by companies and organizations including: Target Corporate, Berbee, Cargill, Koch Industries, Nex-Tech, Eagle Communications, AT&T, the State of Kansas, and KWCH Television.

KFHS Television began distributing media content to 33 Nex-Tech communities with the Fall 2007 semester. This is in addition to the five communities KFHS reaches via the Eagle Communications cable network. KFHS Television also webcast and then tape delayed all home football games and basketball games during the 2007-2008 academic year.

KFHS provided studios, student staffing, engineering, and faculty support for the Smoky Hills Public Television program “Doctors on Call” which is broadcast across the Western 3/5ths of Kansas.

The Department of Information Networking and Telecommunications received two substantial equipment grants and a very helpful smaller grant. Nortel Networks donated equipment with a value of \$282,785. Cisco donated equipment with an estimated value of \$750,000. Nex-Tech donated money to purchase equipment cabinets to mount the Cisco equipment. The value of this donation was \$5,600. This equipment was received in late June 2008 and will be deployed for student instruction for the Fall 2008 semester.

B. Department Performance Indicators

Key Performance Indicator	Baseline FY2004	Actual FY2005	Actual FY2006	Actual FY2007	Actual FY2008
Freshmen	28	25	31	20	31
Transfer Students	28	33	25	28	47
Number of Majors:					
Undergraduate first majors	186	184	205	219	226
Undergraduate second majors	5	8	6	4	4
BGS Students			45	74	42
Graduate					
MLS students	25	32	24	24	21
Major Retention	70%	63.48%	61.69%	56.08%	

Key Performance Indicator	Baseline FY2004	Actual FY2005	Actual FY2006	Actual FY2007	Actual FY2008
Student Credit Hour					
Undergraduate	3716	3683	3612	3675	3625
Graduate	252	348	240	250	310
Faculty					
Tenured or Tenure-track Faculty (Headcount)	4	5	5	5	6
Non Tenure-Track Faculty (Headcount)					
Other Faculty (Headcount/Sections Taught)	2	1	1	1	2
Degrees					
Undergraduate degrees	18	21	29	32	25
MLS degrees	4	8	9	6	8
Scholarly Activity (See Section IV for documentation requirement)					
Number of books, book chapters, and refereed articles published	1	3	2	5	5
Percent of faculty publishing refereed books, chapters, or articles	16%	50%	33%	66%	86%
Number of non-refereed articles and presentations	3	3	6	4	16
Percent of faculty publishing non-refereed articles or presentations	50%	50%	100%	66%	100%
Number of scholarly performances and other creative activities					1
Percent of faculty in scholarly performances or other creative activities					14%
Total number of external grant applications submitted/percent of faculty submitting [TOTAL NUMBER OF EXTERNAL GRANT APPLICATIONS/PERCENT FUNDED]	2 33%	2 33%	2 33%	6 83%	6 50%
Total number of funded external grants/percent of faculty funded [DOLLAR AMOUNT OF EXTERNAL GRANT					14%
					\$1,038,185

Key Performance Indicator	Baseline FY2004	Actual FY2005	Actual FY2006	Actual FY2007	Actual FY2008	
APPLICATIONS, PERCENT OF FACULTY FUNDED]					71%	
Service Activity						
Percent of faculty meeting acceptable standard of service activity [NOTE: this percent includes faculty meeting exceptional standard of service activity.] [PERCENT OF FACULTY MEETING MINIMAL STANDARD DURING MERIT EVALUATION]	100%	100%	100%	100%	100%	
Percent of faculty meeting exceptional standard of service activity	66%	66%	66%	83%	71%	
Assurance of Student Learning						
<p>Direct Outcome 1</p> <p>Outcome/Indicator 1: Pre-Post Test: The INT Department has worked for several years to develop and to refine a pre-post test that is administered in INT300 Foundations of Information Networking and in INT490 Capstone in Information Networking. Statistical improvement of scoring is an important quality measure.</p> <p>* In the spring of 2004, seniors were not offered any credit for taking the exam and the instructor believed the results were very unreliable.</p> <p>In the spring of 2005, seniors were required to take the test as part of their grade for INT490. Seniors did well on the 60 point exam.</p> <p>The 05-06 test was more difficult than the 04-05 test. The tests will not be identical as curriculum and faculty change.</p> <p>The same exam was used in 06-07 as in the previous year. It was reworked for 07-08 as technology and law have already changed.</p> <p>A new test was administered to all Foundations and Capstone students during the 07-08 academic year.</p> <p>Comparing Virtual College pre and post test results:</p> <p style="text-align: center;">P Value 1.06 E -2</p>			<p>Pre-Test 05-06 <u>On-Campus</u> Mean: 54.78%</p> <p>Post-Test Spring 2005 The mean was 53.33 or 88.89%. The test was revised for 05-06 to reflect changes in curricula and technologies. Therefore, year-to-year comparisons are not accurate.</p>	<p>Pre-Test 06-07 <u>On-Campus</u> Mean: 48.52%</p> <p>Post-Test Spring 2006 <u>On-Campus</u> Mean: 62.38</p> <p>T-Test comparing on-campus to on-campus pre and</p>	<p>Pre-Test 07-08 <u>On-Line</u> Mean: 49.31%</p> <p>Post-Test Spring 2007 <u>On-Line</u> Mean: 62.98%</p> <p>T-Test comparing on-campus to on-campus pre and</p>	<p>Pre-Test 07-08 <u>On-Line</u> Mean: 56.13%</p> <p>Post-Test Spring 2008 <u>On-Line</u> Mean: 79.39%</p> <p>T-Test comparing on-campus to on-campus pre and</p>

Key Performance Indicator	Baseline FY2004	Actual FY2005	Actual FY2006	Actual FY2007	Actual FY2008
<p>We have a statistically significant difference in the scores of Capstone students compared to Foundations students in 2006, 2007 and 2008.</p>			post test results: P Value 8.97368E-06	post test results: P Value 1.26 E -4	post test results: P Value 4.41875E-08 T-Test comparing VC to VC pre and post test results: 3.25E-06
<p>Direct Outcome 2</p> <p>National Certification Exams:</p> <p>Cisco Certified Network Associate Certification Exam Scores - The exam is an excellent mechanism for weighing student achievement using an outside assessment tool.</p> <p>*As of the 2003 academic year, we lengthened to three classes those preparing students. Far fewer took the exam.</p>	CCNA 4	CCNA 5	CCNA 5	CCNA 3*	CCNA7
<p>Outcome/Indicator 2: The Cisco Certified Network Professional (CCNP) Certification requires passage of four exams. This certification is extremely valuable and reflects advanced skills and knowledge. Upper division students and graduate students venture this series of exams.</p>	CCNP 4	CCNP 4	CCNP 4	CCNP 3	CCNP 4
<p>Indirect Indicator 1</p> <p>INT Student Placement Six Months after Graduation: Employability of students is a market driven indicator of approval of knowledge and skills gained while matriculating in the university environment. Placement can and will be affected by external market factors and ideally would be weighed against placement data from other institutions. Such benchmarking is currently not possible due to a lack of data.</p>	Employed in Major field or in graduate school 30 of 33 BA and BS Graduates 90%	Employed in Major field or in graduate school 24 of 27 BA and BS graduates 88%	Employed in Major field or in graduate school 37 of 40 BA and BS graduates 92.5%	Employed in Major field or in graduate school 22 of 24 BA and BS graduates 91.7%	Employed in Major field or in graduate school 30 of 36 BA and BS graduates 83%
	Employed	Employed	Employed	Employed	Employed

Key Performance Indicator	Baseline FY2004	Actual FY2005	Actual FY2006	Actual FY2007	Actual FY2008
<p>Indirect Indicator 2</p> <p>The Kansas Broadcasters Association administers an awards and scholarship program open to all Kansas colleges and universities. Fort Hays State University INT traditionally does well in these programs.</p>	<p>outside field 3</p> <p>Overall placement 100%</p> <p>Awards 1st Place: 5 2nd Place: 3</p> <p>Internship Stipends/Scholarships 6</p>	<p>outside field 2</p> <p>Overall placement 96</p> <p>Awards Honorable Mention: 2</p> <p>Internship Stipends/Scholarships 6</p>	<p>outside field 0</p> <p>Overall placement 93%</p> <p>Awards 1st Place: 1 2nd Place: 1</p> <p>Internship Stipends/Scholarships 2</p>	<p>outside field 2</p> <p>Overall placement 100%</p> <p>Awards 1st Place: 3 2nd Place: 1 Honorable Mention: 1</p> <p>Internship Stipends/Scholarships 2</p>	<p>outside field 2</p> <p>Overall placement 89%</p> <p>Awards 1st Place: 3 2nd Place: 0 Honorable Mention: 1</p> <p>Internship Stipends/Scholarships 2</p>
<p>Other Department Key Performance Indicators (up to 3 additional measures, optional) [NOTE: Departments may pick up to three key performance indicators they currently measure but are not captured above. These measures could be used to track departmental results on specific yearly goals. Examples might include: number of SRPs attended, number of new freshmen contacted. (These will vary by department based on goals.)]</p> <p>Outcome/Indicator 1</p> <p>Awards of Excellence offered to students with 22 ACT or Above:</p>					<p>64</p>

Key Performance Indicator	Baseline FY2004	Actual FY2005	Actual FY2006	Actual FY2007	Actual FY2008
Outcome/Indicator 2 Awards of Excellence Accepted by students with a 22 ACT or Above:					9
Outcome/Indicator 3 Awards of Excellence Offered to students with 20 ACT or Above:					84
Awards of Excellence Accepted by students with a 20 ACT or Above:					13
Number of Faculty Visiting Foreign Campuses	XX	XX	XX	XX	0
Number of Students (majors) Participating in Study Abroad and Exchange Programming	1	0	1	0	1

C. Department Quality Initiatives and Results

FY2008 Quality Initiatives	Results
Conduct curriculum mapping of Web Development curriculum.	Curriculum was mapped and aligned with the CIW industry certification. Classes are being instructed according to this mapping. The background review of literature and mapping was used by faculty as the base for a conference paper and publication.
Conduct curriculum mapping of Media Studies curriculum.	This mapping began and covered a portion of the Media Studies classes. It was incomplete.
Adjust INT 405 Research Methods courses to emphasize the importance of decision making as the primary purpose for research tools.	The Spring 2008 student ratings of this class were the highest in the course's history (1997 forward). Further adjustments will need to occur. The decision in 2006 to require the Mathematics Statistics class as a required General Education class laid the foundation for this quality initiative.

FY2009 Quality Initiatives	Responsible Party, Resources, and Plan
Complete developing credentials and seek to become a National Center of Academic Excellence in Information Assurance (NACE)	Information Assurance faculty member and INT Department Chair.
Examine MIS curriculum and INT curriculum to determine means of leveraging faculty expertise and competitive structure of MIS degree. Align curriculum with ABET accreditation standards.	MIS and INT Computer Networking, Information Assurance and Web faculty. Effort led by INT Department Chair.

D. Institutional Quality Results

FY2008 University Initiatives	Department Activities/Results
Improve undergraduate student's writing abilities	The INT Department has identified several courses as "Writing Intensive" courses. These include two INT core course, INT 430 Leadership in INT and INT 610 Policy, Law, and Ethics in INT
Develop mobile computing teaching and learning environment	INT students provide much of the staffing for the Learning Commons and the FHSU CTC Helpdesk. INT students have served as the FHSU Wireless Administrator for the last three years. FHSU faculty teach many of the classes that enable the network and its security. INT regrets that it has been bypassed in trials of smart phones and tablets when its faculty are among the most tech savvy at the university.
Internationalize the campus and curriculum	INT course such as Global Telecommunications and Law of Cyberspace examine world-wide efforts to regulate telecommunications, media, and the web. INT is proud of its continued enrollment of on-campus student from China, Japan, Austria, the Netherlands, and other countries. INT students have participated in exchanges to Germany and China.
Strategically manage new enrollment opportunities	INT wants to encourage the university to keep up its effort with the Navy. The reducing numbers of Navy students concerns the INT Department. The INT Department is leading efforts to build relationships with the FBI's Computer Forensics Crime Labs and with the Kansas Air National Guard. The INT Department has agreed to expand to SIAS and has 54 students expected to begin FHSU INT classes in China in the Fall of 08...
Improve student learner outcomes in computing	The INT Department leads the campus in the effort. It has aligned INT 250 Intro to Web Development with the CIW certification during the last year. INT continues to align INT 291, 292, 293 Internetworking I, II, & III with the Cisco Certified Associate Certification. Four graduate classes are teamed together to align to the Cisco Certified Network Professional Certification. INT also has aligned INT 654 Intro to Web Enabled Databases: Oracle with a advanced web certification. INT's acquisition of over a million dollars of new networking equipment in June 2008 will substantially enable its educational efforts for both on-campus and distance learning students.

III. FY2009 STRATEGY AND OPPORTUNITIES FOR IMPROVEMENT

A. Departmental Reflection of Strengths, Needs, Opportunities, and Threats

Current Strengths	Current Needs
<ul style="list-style-type: none"> - Faculty innovation and dedication - Small class sizes - Drive change, not complacent - Labs and facilities - Streaming video thrust (games, dept. web page, ATSO live, KFHS on-line) - Good experience valued by employers - Advisory Council active in planning and review - Excellent reputation among those who know of INT - Much of the curriculum has been carefully reviewed and is well planned and executed. - Industry support is excellent; 	<ul style="list-style-type: none"> - Job placement tracking? Any? How do we rate? - Radio side of Media seems to be weak (but Democracy Matters...) - No MySpace/Facebook presence to speak of...? ... needed - Promotional materials need substantial updates. - OOE Budget does not address needs and opportunities. - Cisco Academy Network is suffering from a lack of a person devoted to servicing it. - FHSU and FHSU INT lack name recognition and awareness in key population centers. - Challenge of integrating two faculty sets into one team and culture.
Future Opportunities	Future Threats
<ul style="list-style-type: none"> - See what businesses want or need from MIS students. - Great strengths and opportunities in project management. - Market small class sizes and access to faculty. - Air National Guard Cyber Security Relationship - Virtual college student growth, support with streaming video. - Market tours and career interactions. - Market hands-on learning interactions and activities. 	<ul style="list-style-type: none"> - National economy - Constant change

B. Opportunities for Improvement

[NOTE: Short-term OFIs are meant to be low or no-resource quick changes that can favorably impact the department. If these simply replicate what you have declared as a FY2008 Departmental Initiative, then delete this section.]

Short-Term OFI	Resources Required	Expected Result and Completion Date
Develop recruiting program for Information Assurance.	A paid search program, an expanded web presence, brochures need to be developed for distribution to military bases. Mailings need to expand.	Money needs to be released from the Information Assurance appropriation to enable this action.
Build joint recruiting program with	Expanded website, brochures, pre-	Materials should be developed

the Kansas Air National Guard and FHSU Admissions Office	prepared email messages. Education of both KANG and FHSU recruiters.	during the summer of 2008.
Dramatically expand the INT Department's on campus and Virtual Lab capabilities using donated Nortel and Cisco equipment.	The donated equipment will require supplementation of cables, power control units, and misc hardware to make them into usable lab tools. Hundreds of hours of faculty, engineering and student labor will be required to optimize use of these labs.	By Fall 2008, some equipment will be incorporated into existing labs to expand capabilities. Additional equipment will be added into lab exercises on an on-gong basis. The Nortel equipment should be available and operating for the Spring 2009 offering of Modern Telephony.

[NOTE: Long-term OFIs are meant to be resource-intensive changes requiring permanent or one-time resources that can favorably impact the department over the long-term.]

Long-Term Strategic Initiatives	Resources Required	Expected Result
Continue on road to establishing a Center of Academic Excellence in Information Assurance	The INT Department has been successful in attracting a faculty member with Information Assurance expertise and with curriculum certification from the NSA. The next steps are to add a second faculty member and to file for designation in January 2008.	Establishing Kansas's sole Center for Academic Excellence in Information Assurance will provide Fort Hays State University with distinction and will be a powerful tool for recruiting and for leveraging gifts from the private sector. FHSU will be able to seek funding from the NSF and NSA which is reserved for CAEs.
Revamp and set up a sustainable system for Cisco Networking Academies at the high school level.	The position and budget in the Information Assurance legislative appropriation must be released to provide staffing, travel and other resources.	Significant expansion of on-campus students in INT and MIS concentrations. This should result in at least 200 headcount within four years and expand dual credit activities.
Establish an INT Honors Program	The INT Honors Program will require a faculty member's focus as a primary service activity and will require some private gifting to support awards and dinners.	The INT Department expects to recruit and to retain highly capable students. It also expects to establish lasting ties with these students that will extend throughout their careers.
Integrate MIS faculty and resources with INT faculty and resources. Revive MIS/CIS degree and enrollments. To regain credibility, one strategy is become ABET accredited.	This process is early and the resources needed have not yet been identified. MIS has lost two faculty positions in the last four years. Faculty are concerned about the ability to offer all required classes and a reasonable set of quality electives. MIS Faculty are concerned that the faculty member teaching nearly all of the MIS 101 classes is stretched too thin and that students may need more assistance than they are receiving in this class.	Re-development of a IT/Business oriented degree should have a healthy market. Other programs are successful at other universities. This is one of the more common degrees at universities across the country.

<p>Mount a Masters of Science degree with a core and multiple concentrations.</p>	<p>The INT Department needs to add an additional core faculty member. It will need additional OOE for recruitment and support.</p>	<p>FHSU has the opportunity to develop a nationally known and significant on-line and on-campus masters program that will continue to build relationships with industry, prepare students for outstanding careers, and increase credit hour production.</p>
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IV. SUPPORTING MATERIALS

A. Department Degree Program Affinity Diagram(s)

College of Arts and Sciences

Department of Information Networking and Telecommunications Affinity Diagram (ver. 6.21.08)

What are the **elements/building blocks** of a degree program in Information Networking and Telecommunications that will meet the educational needs of the prospective information networker?

Characteristics of Information Networkers	Expected ← Learning Outcomes	← Curriculum	Assessment Approach and Methods	Desired Outcomes
<p>Knowledgeable They use theories about the nature and behavior of information to manage its movement and use in a networked society.</p> <p>Creative/Flexible They analyze problems from a fresh perspective using solid analytical tools. They can change organizational and personal directions to respond to environmental changes.</p> <p>Strategy Minded They see the big picture including the political, social and economic context of information and information distribution systems.</p> <p>Innovative/Adaptive They are knowledgeable about new opportunities and threats in electronic media and distributions systems.</p> <p>Persistent They go the extra mile, don't give up, and pay attention to detail.</p> <p>Cooperative They are team players and see the end-user's point of view.</p> <p>Competitive/Desire to Improve They are aware of</p>	<p>Goal A To understand that creating and providing valuable information to the end user is the purpose of information networking.</p> <p>Objective #1 To understand user needs and the ability to develop media or web content, or to provide network conduits or retrieval systems to provide the user with valuable information.</p> <p>Objective #2 To think creatively and strategically to create improved content or delivery systems and to understand that the tools available constantly improve and that user expectations evolve rapidly.</p> <p>Goal B To implement information networks using knowledge, skills, electronic visual and aural media, computer processing, and telecommunications.</p> <p>Objective #1 To illustrate and explain the major models of information movement and use and to understand the convergence of technologies.</p> <p>Objective #2</p>	<p><u>← Curriculum</u></p> <p>Program Core Curriculum <i>Develops Knowledge</i> INT 300 Foundations of Information Networking INT 250 Introduction to Web Development Cognate: MATH 250 Elements of Statistics INT 405 Research Methods in Information Networking INT 430 Leadership for Information Networking</p> <p><i>Develops Perspective</i> Cognate: COMM 318 Introduction to Organizational Communications INT 610 Public Policy, Ethics & Law in Information Networking INT 490 Capstone Seminar in Information Networking</p> <p>Media Studies Concentration (Core Curriculum) <i>Develops Knowledge</i> INT 140 Introduction to Electronic Media</p> <p><i>Develops Skills</i> INT 348 Beginning Audio Production INT 346 Video Production INT 624 Broadcast Continuity Writing INT 342 Campus Radio Station Operation INT 349 Campus Television Station Operation</p>	<p><i>Knowledge</i></p> <ol style="list-style-type: none"> Pre-test/Post-test which tests knowledge and student competencies obtained from the degree core for all students within the major. Industry Certifications Networking students are required to assess their mastery through the CCNA examination. Other students will be encouraged to take certifications corresponding with their areas of expertise. E.g. Web, Video Editing, Wireless Networking, Security, etc. <p><i>Skills</i></p> <ol style="list-style-type: none"> Capstone Project development and evaluation for each student. Project will be assessed by INT Faculty and also evaluated by an independent panel of industry leaders and specialists. <p><i>Perspective</i></p> <ol style="list-style-type: none"> Senior Focus Groups, Survey & Exit Interviews to identify satisfaction with learning experiences, choice of major and department policies and procedures. INT Advisory Council meetings provide feedback from current students, 	<p><i>Knowledge</i></p> <ol style="list-style-type: none"> Pre-test/Post-test Graduating students will have substantially greater knowledge than incoming students. This will be measurable statistically. Industry Certifications Students will achieve certifications that meet national and international standards. Such certifications are administered by third parties providing objectivity and neutrality. <p><i>Skills</i></p> <ol style="list-style-type: none"> Capstone Project Students will create high quality group capstone projects demonstrating knowledge and application. Students will also be required to individually reflect on lessons learned in this culminating project. <p><i>Perspective</i></p> <ol style="list-style-type: none"> Senior Focus Groups, Survey & Exit Interviews INT and FHSU will receive unvarnished feedback and critique. Ideally, much of this will be positive, but INT and FHSU need to be aware of opportunities and needs for improvement.

<p>marketplace dynamics and organizational realities; they stay ahead of change through visionary thinking and initiating change.</p>	<p>To explain the importance of social integration of information systems and how they interact with people – particularly with adoption of new innovations and technologies.</p> <p>Objective #3 To demonstrate critical thinking and problem-solving skills engaging assessment, implementation, and synthesis components.</p> <p>Goal C To develop skills related to visual and aural literacy skills.</p> <p>Objective #1 To demonstrate concepts of visual and aural information and human-technology interaction.</p> <p>Objective #2 To demonstrate techniques that enable creativity, aesthetic design, and production processes.</p> <p>Objective #3 To identify and understand ethical, policy and legal issues in digital content creation and distribution.</p> <p>Goal D To develop leadership skills and the ability to manage people, information, and resources to deliver information services.</p> <p>Objective #1 To develop skills as team players and effective communicators.</p> <p>Objective #2 To develop an understanding of business plans, consulting proposals, and effective use of project time lines.</p> <p>Objective #3 To develop fundamental time and project management skills.</p> <p>Objective #4 To develop a fundamental understanding of statistical research methods and of financial data and the ability to use</p>	<p>Develops Perspective INT 476 Apprenticeship in INT</p> <p>Computer Networking Concentration (Core Curriculum) Develops Skills INT 291 Internetworking I INT 292 Internetworking II</p> <p>Develops Knowledge INT 291 Internetworking I PHYS 230 Telecommunications Electronics INT 680 Network Arch & Data Communications I</p> <p>Develops Perspective INT 681 Network Arch & Data Communications II</p> <p>Web Development Concentration (Core Curriculum) Develops Skills & Knowledge INT 650 Interactive Systems Design INT 651 Advanced Web Development INT 652 Intensive Web Development</p> <p>Develops Perspective INT 658 Law of Cyberspace ART 240 Basic Design</p>	<p>alumni, and non-affiliated industry representatives. Council members provide guidance and feed back on external and internal ecosystem changes, curriculum, student preparation, and department scholarly activities.</p> <p>3. Market studies to identify industry trends and technology integration within media, web networking and telecommunications industries. Market studies will be used to identify educational needs and will originate from industry and governmental sources such as the U.S. Department of Labor.</p>	<p>2. INT Advisory Council This council should provide guidance, ideas, linkages, and feedback. It is able to provide valuable perspective through alumni and employer voices. The Advisory Council should help maintain and grow a healthy ecosystem for recruitment, learning, internships, and placement.</p> <p>3. Market Studies Market studies performed by industry of governmental organizations such as the U.S. Department of Labor identify technology trends and skills needs and provide a powerful tool for planning and curriculum alignment.</p>
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	<p>statistical and financial tools as leaders.</p> <p>Goal E To demonstrate familiarity with the ethical issues and the public policy regarding telecommunications systems.</p> <p>Objective #1 To understand conceptual foundations of freedom of speech, information regulation, and intellectual property.</p> <p>Objective #2 To understand the general framework and key areas of media, telecommunications, and intellectual property regulation in the United States and globally.</p> <p>Objective #3 To be able to transfer knowledge of changes in the regulatory environment to business strategy and solutions for end users.</p> <p>Goal F To develop skills and attitudes of professionalism.</p> <p>Objective #1 To be thoroughly familiar with professional standards of conduct.</p> <p>Objective #2 To be aggressive life-long learners and capable of finding, storing and effectively using information and knowledge.</p> <p>Objective #3 To be well acquainted with the legal and social environment of the information networking professions.</p> <p>Objective #4 To understand the systems of certifications and licenses that affect information networking professions.</p>			
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B. Department Staffing Plan

College of Arts and Sciences
INT Department Staffing Plan and Assignments (Projected 2008-2009)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Current Department Needs	Faculty Member	Current Faculty Expertise	Retirement (Birth date)	Assigned Instructional FTE's	Rank Current Date	Degree Completed	Track
Department Chair	Bannister, Mark	Administrative		.5	Chair 1999	Juris Doctorate	Administration
Information Networking Theory	Bannister, Mark	Law and Policy INT Degree Core		.5	Associate Professor 1999	Juris Doctorate	Tenured
Internetworking/ Telecommunications	Shaffer, Kevin	Advanced Internetworking/ Telecommunications		1.0	Associate Professor 1998	Masters – Ph.D in progress	Tenured
Web Development/Networking	Walters Angela	INT Degree Core/ Web Development MLS Core		1.0	Assistant Professor 2005	Masters – Ph.D in progress	Tenure Track
Media Studies	Hanks, Mel	Broadcast Journalism/ Continuity Writing/News/Radio/ Communication theory		1.0	Assistant Professor 2005	Masters	Tenure track
Media Studies/Web Development	Schleicher, Steven	New Media Video Production/ Web Development		1.0	Associate Professor	Masters	Tenured
Network Security	Jiang, Keyu	Network Security		1.0	Assistant Professor 2007	Ph.D.	Tenure Track
Internetworking/Telecommunications/Network Security	Tholstrup, John	Internetworking/Telecommunications/Network Security		1.0	Instructor	Masters	Instructor
Information Networking Theory	New Hire	INT Degree Core/Leadership, Research Methods, Foundations		1.0 FTE	Full-time Instructor	Masters – Ph.D. preferred	Tenure Track
Media Studies	Koerner, Mike	Video Production		Seasonal S, F, & U	Adjunct Instructor	Masters	Part-time
Networking	Wu, Woody	Linux & Unix		Virtual College S	Adjunct Instructor	Masters	Part-time
Information Networking Theory, Networking, & Web Development	Rohlf, Mark	Foundations of INT		Virtual College S, F, & U	Adjunct Instructor	Masters	Part-time
Web Development	Patricia Anderson	Web Development		Virtual College S & F	Adjunct Instructor	Masters	Part-time
Internetworking	Helm, Eric	Internetworking		Virtual College S	Adjunct Instructor	Masters student	Part-time
Linux	Wu, Woody	Linux		Virtual College S & F	Adjunct Instructor	Masters	Part-time
Information Networking Theory	Huff, Jerry	Information Networking Theory/Law of Cyber Space Class		Virtual College S	Adjunct Instructor	Juris Doctorate	Part-time
Law and Policy in Information Networking	Wiggins, Michael	Law and Policy in Information Networking		Virtual College S	Adjunct Instructor	Juris Doctorate	Part-time
Project Management	King, Dennis	Project Management		Virtual College S & F	Adjunct Instructor	Masters	Overload
Web Development	Kollman, Martin	Web Development		Virtual College S & F	Adjunct Instructor	Masters	Part-time
Media Studies	Wellbrock, Gerard	Sports Announcing		Virtual College S & F	Adjunct Instructor	Bachelors	Part-time

Action plans for future positions:

Web Development & Web Security	New Hire	Network Security		1.0 FTE	Assistant Professor	Ph.D.	Tenure Track
Information Assurance Program Specialist	New Hire	Information Assurance, Internetworking and administrative skills		1.0 FTE	Program Specialist	Bachelors	Program Specialist

C. Bibliography of Departmental Scholarly Activity

Department of Information Networking and Telecommunications Bibliography of Scholarly Activity FY 2008

Jiang, Keyu and Mark Bannister (2008), "Secure 'Information at your fingertips'---Just One Course can help," Colloquium on Information Systems Security, June 4, 2008, Proceedings from the Twelfth Colloquium for Information Systems Security Education, ISBN: 1-933510-96-8.

Bannister, Mark and Jon Tholstrup, (2008) "Eligible Telecommunication Carrier Designation, the Kansas Case Study 1997-2007," *International Telecommunications Research and Education Association Conference*, Louisville, Kentucky, March 27, 2008. Proceedings of the International Telecommunications Education and Research Association, 2007. Vol 4.

Shaffer, Kevin (2008). "Managing Subjectivity in Qualitative Risk Assessment of Communication Networks Using a Modified Delphi Approach," *International Telecommunications Research and Education Association Conference*, Louisville, Kentucky, March 27, 2008. Proceedings of the International Telecommunications Education and Research Association, 2007. Vol 4.

Shaffer, K., & Tholstrup, J. (2008). "Comparing Telecommunications Laboratory Remote Access Methods to Effectively Support Distance Learners," *International Telecommunications Research and Education Association Conference*, Louisville, Kentucky, March 27, 2008. Proceedings of the International Telecommunications Education and Research Association, 2007. Vol 4.

Walters, Angela, Mark Bannister, "Integrating Web Development Curriculum with International Industry Standards," Business and Leadership Proceedings, 2007, Vol. 3, No 1. 1 p. 77-80

Book Chapters

Adobe After Effects CS3 Classroom in a Book, Adobe Press, published October 2007, Stephen Schleicher Contributing Author

Non-refereed articles and presentations

Bannister, Mark – Contributing Author, Editor and Subject Matter Expert, *Leveraging our Foundations and Designing the Future: A Kansas Economic Renaissance, The 2007 Kansas Economic Development Strategic Plan*, Kansas, Inc. 2007.

Hanks, Mel, **Getting It First and Getting It Right: A TV Reporter's Guide to Surviving in the Trenches**, Outskirts Press, Denver, Colorado (2007).

Schleicher, Stephen

Coolness Roundup podcast, www.coolnessroundup.com, creator and host DVICE, www.dvice.com, contributor

Major Spoilers, www.majorspoilers.com, creator

Major Spoilers Podcast, co-creator and host

Shaffer, Kevin – Panel Presenter: Kansas Banker's Association Technology Conference, February 2008.

Walker, Mike (Sociology) and Bannister, Mark – Highland Community College Strategic Plan, 2008.

All INT faculty presented in the INT Faculty Research Colloquium, January 14, 2008.

Number of scholarly performances and other creative activities

Walters, Angela – *Certified as a Certified Internet Webmaster*.

D. Department Program Assessment Results

The INT Seniors in INT 490 Capstone in INT compiled their own SWOT analysis of the INT Department. This feedback from seniors is very relevant and has been considered by faculty and the INT Advisory Council.

Strengths

- Great personal relationships
- Knowledgeable, qualified, eager, and interactive teaching staff with years of experience
- Progressive with industry standards and demands
- Hands on equipment right away (editing, camera, networking gear)
- Training on equipment that is used "in the real world"
- Faculty desire for us to do well
- Very open and approachable
- Early foot in door
- Strong peer to peer relations
- Room for mistakes and to grow

Strengths (continued)

- Network and reputation
- Media professors have real world experience
- Degrees include technical, communication and techniques
- Strong networking connection and opportunities
- Ability of student to contribute and to be involved starting from the freshman year

Weaknesses

- Weak radio broadcasting program
- Some classes are only offered virtual
- Need more opportunities for classes on campus
- Most classes are only on Tuesday and Thursday
- Weak advanced web design classes
- Need an over the air radio station
- Some equipment is outdated
- Media could offer more on the film side
- Needs more radio focus and music emphasis or just audio in general
- TV and video overpower radio
- Media job connections
- Access to NBS listserv
- Getting students into organizations
- Need more feedback

Opportunities

- INT emphasis in music technology
- More INT sales classes – broadcast, networking, flash class, web
- Eagle Radio partnership
- Offer more film production classes
- Networking and Alumni
- Departmental trips
- Organizational trips (ATSO & NBS)
- More help connecting students to internships
- More audio classes- better content in beginning audio
- More integration with other departments, business, communication, and journalism
- Encourage modern language
- Expanded web classes

Threats

- Being in western Kansas
- Lack of diversification in community

Threats (continued)

- Lacking funding due to affordable success
- Lack of motivation of media studies students
- Rapidly changing technology

E. Other Departmental Information

INT faculty member Kevin Shaffer was recognized in Washington, DC as the Kansas Cisco Networking Academy "Faculty Member of the Year" for Kansas in 2007.

Angela Walters was nominated for the Pilot Award for 2008.

F. Special AQIP Report

The INT Department mapped the Web curriculum during the summer of 2007. INT Media faculty have begun mapping the Media Studies curriculum.

The INT Department is in the process of developing multiple affinity diagrams to illustrate the INT concentrations in the Masters of Liberals Studies. This include: Web Development, Computer Networking and Telecommunications, Information Assurance, and a general emphasis.

General Parameters

1. No more than 20 pages, excluding appendix information.
2. Report submitted electronically to Dean, Assistant Provost for Quality Management, and Provost.
3. Note deadlines attached below.

Annual Timeline for Department Annual Report

February 15	Draft Template distributed to Deans.
April 1	Final Template and Directions distributed to Department Chairs. Selected enrollment data (fall 20 th day counts) distributed to Chairs and Deans.
June 1	Student system information (graduates, SCH) delivered to Chairs.
June 1	Final cutoff date for elements to be considered in the Department's Annual Report.
June 30	Complete Department Annual Report due to Deans, Assistant Provost for Quality Management, and Provost. Submit electronically.
August 15	Completed College/Unit Annual Report due to Assistant Provost for Quality Management and Provost.