WSU Five-Year Program Review

Self-StudyCover Page

Department: Telecommunications and Business Education

Program: Telecommunications Administration Major

Semester Submitted: Fall 2011

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A. Brief Introductory Statement

The Telecommunications Administration major is in the Telecommunications and Business Education Department (TBE) in the College of Applied Science and Technology (COAST) at Weber State University (WSU). Students have the following degree options:

- Bachelor of Science in Telecommunications Administration
- Associate of Applied Science in Telecommunications Administration
- Minor in Telecommunications Administration
- Certificate in Telecommunications
- Certificate in Network Technologies

Students learn to maintain voice and data telecommunications systems. For voice systems, students will design, install and manage phone systems, as well as practice programming switches for telephone applications in a lab situation. For data systems, students learn Linux, Microsoft, and Cisco operating systems as well as master computer programs for Web design, graphics, word processing, spreadsheets, and databases. Students learn and apply concepts about computer virtualization, wireless, network security, and cyber policy and ethics. Students learn to install software and configure data systems to operate efficiently. An internship provides students the opportunity to work in a corporate networking department.

Graduates in this major may work in the telecommunications industry including working with a voice network, a data network, or a converged network. Jobs may focus on local area networks (LAN), fiber optics, switches, firewalls, telemarketing operations, microwave and satellite communications, online databases, telephone systems, voice technology, network security, and telecommunications circuitry.

B. Mission Statement

The Telecommunications and Business Education Department is committed to providing the highest quality undergraduate programs while preparing students to assume roles in decision making, leadership, research, and service to community and business.

The department assists students in developing, communicating, and applying knowledge for the technical and professional world as well as gaining a desire for lifelong learning.

C. Curriculum

<u>Curriculum Map</u>

		Departm	ent/Progra	am Learnin	g Outcome:	S
Core Courses in Department/Program	Learning Outcome 1: Effective Business Communication Skills	Learning Outcome 2: Effective Computational Skills	Learning Outcome 3: Knowledge and Skills	Learning Outcome 4: Implementation of Decision-Making and Problem Solving Skills	Learning Outcome 5: Licensure	Learning Outcome 6: Knowledge of Ethics and Professionalism
TBE 1040 Speedbuilding/Keyboarding			U		NA	
CEET 1105 (discontinued course)						
CEET 1110 Basic Electronics		Е	U	U	NA	
TBE 2010 Business English	U		U		NA	
TBE 2080 Database Applications			U		NA	
TBE 2200 Microcomputer Operating Systems			Е	Е	NA	
TBE 2300 Introduction to LAN Management			U	U	NA	
TBE 2500 (discontinued course)						
TBE 2532 Web Page Design and Development			U		NA	
TBE 2710 Digital Switching Systems			E	E	NA	
TBE 2720 Transport Media & Emerging Technologies			E	E	NA	
TBE 2730 Digital Switching & Transport Applications			U	U	NA	
TBE 3070 Advanced Spreadsheet Applications		E	U	U	NA	
TBE 3090 Advanced Electronic Presentations			U		NA	
TBE 3250 Business Communication	A				NA	
Acctng 2010 Survey of Accounting I		Е	Е		NA	
TBE 2415 Cisco TCP/IP Protocol Suite, Routing Protocol & Configuration			Artifact	U	NA	

		Departm	ent/Progra	am Learnin	g Outcome	S
Core Courses in Department/Program	Learning Outcome 1: Effective Business Communication Skills	Learning Outcome 2: Effective Computational Skills	Learning Outcome 3: Knowledge and Skills	Learning Outcome 4: Implementation of Decision-Making and Problem Solving Skills	Learning Outcome 5: Licensure	Learning Outcome 6: Knowledge of Ethics and Professionalism
TBE 2435 Cisco Adv Routing Protocols, LAN Switching & WAN			Artifact*	U	NA	
TBE 3200 Linux Systems Administration			U		NA	
TBE 3210 (discontinued course)						
TBE 3532 Internet/Database Integration			U		NA	
TBE 3550 Supervising Information Technology	U		U		NA	
TBE 3730 Telecommunications Policy	U		U	E	NA	Е
TBE 4700 Data Network Design			U	U	NA	E
TBE 4710 Traffic Technology & Voice Network Design		U	U	U	NA	Е
TBE 4760 Internship	E	Α	Α	A	NA	A
TBE 4790 Telecommunications Senior Project	E		Artifact	U	NA	
TBE 3300 Advanced LAN Management			Artifact*	U	NA	
TBE 3710 (discontinued course)						
TBE 3720 Advanced Transport Media (3710 & 3720 combined)			U	U	NA	Е
MGMT 3010 Organizational Behavior and Management	U			U	NA	
MKTG 3010 Marketing Concepts & Practices	U			U	NA	

Note: I = Introduced, E = Emphasized, U = Utilized, A = Assessed Comprehensively, Artifact=artifact collected in this course, NA=outcome not applicable to this major

*To be collected Spring Semester 2012

Summary Information

CEET 1105, TBE 2500, TBE 3210, and TBE 3710 have been discontinued for this program. The curriculum from TBE 2500 has been incorporated into TBE 2300, and the curriculum from TBE 3710 has been combined with TBE 3720.

D. Student Learning Outcomes and Assessment

At the end of their study at WSU, students in this program will

- 1. possess effective business communication skills.
- 2. possess effective computational skills.
- 3. possess knowledge and skills of technology.
- 4. implement effective decision-making and problem-solving skills.
- 5. Note: department goal not applicable to this major
- 6. implement effective ethics and professionalism.

Summary Information

The department has six student learning outcomes; however, only outcomes 1, 2, 3, 4, and 6 are assessed in the Telecommunications Administration major.

Evidence of Learning: General Education Courses CIL Lecture, Online, and Library Classes - Fall 2010, Spring 2011, Summer 2011

Word Processing (TBE TA1700 and 1701) Lecture and Online Classes.

Create, edit, and retrieve a document; move/copy text, indent text, space text, find/replace text, number pages, bold/underline/italicize text, center text, format font, create footnotes, headers and footers, insert and place graphics, insert a table of contents and index, choose a theme, spell check document, save/print document, create and edit tables, basic formulas used in tables, table formatting. Know how to create a bibliography and to insert in-text citations. Windows Operating System, E-mail, and Presentations (TBE TB1700 and 1702) Lecture and Online Classes.

Operating Systems

Access Explore and Computer, create directories, create folders and subfolders, delete files and directories, format a storage medium, close an application, copy, move, and create files.

E-Mail

Send, copy, and save e-mail.

Presentations

Create and edit a PowerPoint Presentation. Save/print data. Insert titles, bulleted lists, graphics, animation, transitions; understand smart tags and create outlines; modify presentation by: adding slides, changing slide order, formatting text, inserting headers and footers, inserting a background image, spell check, apply transitions, apply sound and video

Spreadsheets (TBE TC1700 and 1703) Lecture and Online Classes.

Retrieve spreadsheet, adjust column width, enter/erase data cells, create column/row labels, format data, enter/copy functions (AVG, IF, MAX, MIN, PERCENTAGE, PMT, SUM), know how to multiply, divide, add, subtract numbers in Excel coding, know basic formulas for percentages and markup, know how to create an absolute cell reference, create graphs, spell check spreadsheets, save/print spreadsheets; create, format, and edit spreadsheet database.

Information Literacy (LIBS TD1704, 2704, 2804) Lecture and Online Classes.

Find an article database, know how to access the WSU library web site, and find information by using the site. Library Internet research tips and techniques, WSU Stewart Library Web Catalog, know how to find topics in the catalog, know how to research information by using the catalog, understand library terminology, understand citations, Boolean operators (and, or, and not), controlled vocabulary, search engines, and finding scholarly journals. understand Library Catalogs, Article Databases, Reference Resources, Library Instruction, and the Help sections of the library home page. Know how to choose and narrow a research topic. Be familiar with the APA or MLA style guides.

Evidence of Learning Outcomes - Knowledge and Skills

	CIL classes meet the knowledge and skills category										
CIL Lecture, Online, and Library		CIL Lecture,	Online, and Library Classes	CIL Lecture, (Online, and Library	Total CIL lecture, Online, and					
Cla	isses Fall 2010		Spring 2011	Classes	Summer 2011	Library for Fall 2010, Summer 2011,					
						9	Spring 2011				
Passed	92.27%	Passed	90.90%	Passed	88.24%						
Failed	7.73%	Failed	9.10%	Failed	11.76%	Passed	91.02%				
Withdrew	8.16%	Withdrew	7.67%	Withdrew	12.01%	Failed	8.98%				
						Withdrew	8.62%				

Academic Year - Spring and Summer 2011, Fall 2010 - Statistics Table Attached

Total I	Lecture, Online, an	d library Class E Spring		s/Fail, and	Withdrawal
		268			
Er	rolled	Pass	Fail		WD
796	702		62	32	
384	324		61	11	
868	703		50	114	
2048	1729		173	157	
	90.909	%	9.10%	7.67%	,
Total !	Lecture, Online, an	d library Class E	nrollment, Pass	s/Fail, and	Withdrawal
		Summe	r 2011		
Fr	rolled	Pass	Fail		WD
282	226	газэ	23	33	****
227	160		30	37	
332	267		34	31	
841	653		87	101	
	88.249	%	11.76%	12.01	%
Total I	Lecture, Online, an	d library Class E	Enrollment, Pass	s/Fail, and	Withdrawal
		Fall 2			
	rolled	Pass	Fail		WD
736	673		49	28	
381	319		43	19	
868	703		50	115	
1985	1695		142	162	
	92.279		7.73%	8.16%	
	Academic Year T		=		ams
			er 2011, Fall 201		
Spring 2011	Enrolled	Pas		Fail	WD
Spring 2011 Summer 2011	3828	2989	219		319
Fall 2010	1505	1140	127		119
I dil 2010	3809	3001	200		194
Grand Total	9142	7130	546		632

Evidence of Learning: Courses within the Telecommunications Administration Major

	Evidence of Learning: Courses within the Telecommunications Administration Major									
Program Learning Goal	Measurable Learning Outcome	Method of Measurement Direct and Indirect Measures*	Findings Linked to Learning Outcomes	Interpretation of Findings	Action Plan/Use of Results					
Goal 1: Students will possess effective business communication skills	Learning Outcome 1: Students will maintain a score of 3.5 or above on the writing assessment.	Measure 1: Writing Assessment Rubric	Measure 1: Writing Assessment 5.0 4.0 3.0 2.0 1.0 Fall Spring Summer Fall Spring Summer Fall Spring Summer 2008 2009 2009 2010 2010 2010 2011 2011	Measure 1: Since Fall 2008 when this data collection was begun, students have maintained an average score of 3.5 on the written communication assessment.	Measure 1: To continue to evaluate the individual element scores on the writing rubric to improve the sub scores					
	Learning Outcome 2: Students will maintain a score of 3.5 or above on the oral communication assessment.	Measure 2: Oral Communication Assessment Rubric	Neasure 2: Oral Communication Assessment	Measure 2: Since Fall 2008 when this data collection was begun, students have maintained an average score of 3.5 on the oral communication assessment.	Measure 2: To continue to evaluate the individual element scores on the oral com rubric to improve the sub scores					

Program Learning Goal	Measurable Learning Outcome	Method of Measurement Direct and Indirect Measures*		Findin	gs Link	ed to L	earnin	g Out	tcome	s			Interpretation of Findings	Action Plan/Use of Results
Goal 2: Students will possess effective computational skills	Learning Outcome 2: Students will accurately use formulas and functions to perform business	Measure 1: Internship Employer and Student Forms	Academi Year E=Employ	formul functi perform applic	ely uses as and ons to	erro formu funct perform	nal Sk only a few rs with ilas and ions to i busines cations	w Ma	akes nui errors v formula: functioi erform b applicat	with s and ns to usiness	N	A	Measure 1: Of the employers who rated students' computational skills, 25 out of 28 (89 percent) rated students in the highest level.	Measure 1: To continue to have employers rate student's computational skills.
applications.		S=Studen 2009/2010 2010/2011	t <u>E</u>	5 17	0 3	0 7		E 0 0	S 0 0	0 4	0	Of the students who rated their own computational skills, 22 out of 29 (76 percent) rated themselves in the highest level.	To continue to have students rate their computa- tional skills.	
Goal 3: Students will possess effective knowledge and skills	Learning Outcome 3: Students will work beyond the level of educational background.	Measure 1: Internship Employer and Student Forms		Academic E=Emplo S=Stude 2009/2010 2010/2011	Year over ent	Wor beyo level educat backgri E 7	ks nd of ional	Skill: Work leve compa to educat backgr E 6	cs on rel arable o tional	Worllevel leducabackg	tiona	I	Measure 1: Of the employers who rated students' knowledge and skills, 23 out of 37 (62 percent) rated students in the highest level. Of the students who rated their own knowledge and skills, 17 out of 35 (49 percent) rated themselves in the highest level.	Measure 1: To continue to have employers rate student's knowledge and skills. To continue to have students rate their knowledge and skills.

Program Learning Goal	Measurable Learning Outcome	Method of Measurement Direct and Indirect Measures*	Findings Linked to Learning Outcomes						Interpretation of Findings	Action Plan/Use of Results		
Goal 4: Students will possess effective decision- making and problem- solving skills	Learning Outcome 4: Students will identify most problems and implement solutions.	Measure 1: Internship Employer and Student Forms	Academic Ye E=Employer S=Student 2009/2010 2010/2011	pro ar im s	dentific most blems pleme olution	es and nts	probles imples so	tifies me ms and ments me tions \$ 4	id pro imp	Measure 1: Of the employers who rated students' problems solving skills, 32 out of 37 (86 percent) rated students in the highest level. Of the students who rated their own problem-solving skills, 28 out of 35 (80 percent) rated themselves in the highest level.		Measure 1: To continue to have employers rate student's problemsolving skills. To continue to have students rate their problemsolving skills.
		Measure 2: Internship Employer and Student Forms	Academic Year E=Employer S=Student 2009/2010 2010/2011	Make approprion decision most of time E	iate ins the	appro dec some	aking akes opriate isions of the me S 0 2	Unab ma appro decis E 0	ke priate	NA E S 0 0 1 0	Measure 2: Of the employers who rated students' decision-making skills, 34 out of 36 (94 percent) rated students in the highest level. Of the students who rated their own decision-making skills, 33 out of 35 (94 percent) rated themselves in the highest level.	Measure 2: To continue to have employers rate student's decision-making skills. To continue to have students rate their decision-making skills.

		Evidence of Lea	rning: Courses w	ithin the	e Telecor	nmunic	ations A	dminist	ration M	ajor	
Program Learning Goal	Measurable Learning Outcome	Method of Measurement Direct and Indirect Measures*	Findings Linked to Learning Outcomes					Interpretation of Findings	Action Plan/Use of Results		
Goal 5: This outc	ome is not assesse	ed for this major.	<u>I</u>							I	1
Goal 6: Students will	Learning Outcome 6:	Measure 1:	Measure 1:							Measure 1:	Measure 1:
possess	outcome of	Internship			Eth	ics				Of the employers who	To continue
knowledge of ethics and demonstrate professionalism excellent work		Employer and Student Forms	Academic Year	Demonstrates excellent work ethics		Demonstrates good work ethics		Demonstrates poor work ethics		rated students' ethics, 35 out of 37 (95 percent) rated students in the highest level.	to have employers rate student's
	ethics.		E=Employer S=Student	Е	S	Е	S	Е	S	in the nighest level.	work
			2009/2010	13	9	0	2	0	0	Of the students who rated their own ethics,	ethics.
			2010/2011	22	23	2	1	0	0	32 out of 35 (91 percent) rated themselves in the highest level.	To continue to have students rate their work ethics.

^{*}At least one measure per objective must be a direct measure. Indirect measures may be used to supplement evidence provided via the direct measures.

E. Academic Advising

Advising Strategy and Process

Both Dr. Diana Green and Mr. Ken Cuddeback advise students in this major. Dr. Green advises students whose last names start with A-M, and Mr. Cuddeback advises students whose last names start with N-Z. Mr. Cuddeback also advises students at the Davis campus.

Effectiveness of Advising

Students are encouraged to have appointments with their advisors at least once a year. During the interview, plans are created for the sequence of courses needed to complete the requirements in the amount of time designated by the students.

The effectiveness of the advising is shown through students taking the courses in correct sequence; thus, eliminating extra semesters. Those who do not meet with their advisors find their courses out of sequence and cannot take the next course due to prerequisites not being fulfilled.

Past Changes and Future Recommendations

We have created a potential schedule of course work form that outlines the students' progress in the program. The future recommendation is to continue using the form. Students have indicated that the schedule of course work assists them in completing their courses in order and at the right time.

F. Faculty

Faculty Demographic and Diversity Information

Thirteen faculty members teach regularly in the telecommunications administration program.

Main Categories	Subcategory	%
Gender	Female	62%
	Male	38%
Ethnicity	Caucasian	100%
Degree	Doctorate	31%
	Master's	61%
	Bachelor's	8%
Rank/Tenure	Tenured	39%
	Instructor	8%

	Adjunct	46%
Years Teaching	<5	15%
	5-20	46%
	>20	39%

Programmatic/Departmental Teaching Standards and Faculty Qualifications

Adjuncts for lower division courses (1000 and 2000 level courses) Master's degree and 3 years' related experience, and/or related endorsement.

OR

Bachelor's degree with related licensure, certification, and/or endorsement, and 3 years' related experience.

Must submit:

- A current resume
- Copies of teaching licensure or certification
- Documentation of degree and years of related experience

Adjuncts for upper division courses (3000 or 4000 level courses) Master's degree in related field and 3 years' related experience, and/or related endorsement.

OR

Bachelor's degree plus 3 years' experience, related certification/s, plus 15 semester credit hours beyond bachelor's degree.

Must submit:

- A current resume
- Copies of teaching licensure or certification
- Documentation of degree and years of related experience

Campus Adjunct Instructor:

- All campus adjunct instructor classes are student evaluated
- All campus adjunct instructors have impromptu visits from a tenured department faculty member
- All campus course outlines must be submitted to the department administrative assistant and approved by an assigned tenured department faculty member and must follow course objectives as outlined by the Department

Concurrent Adjunct Instructor:

 Concurrent adjunct instructors are visited once a year by the TBE Department Concurrent supervisor

• Concurrent course outlines are submitted for approval and kept on file by the TBE Department Concurrent supervisor

Evidence of Effective Instruction

- Regular Faculty
 All faculty are evaluated at a minimum of once a semester. Any concerns are discussed with the department chair.
- ii. Adjunct FacultyAll faculty are evaluated at a minimum of once a semester. Any concerns are discussed with the department chair.

Mentoring Activities

Faculty mentors work with adjunct faculty to improve teaching and to assist with classroom issues such as testing, syllabi, online, cheating, and classroom discipline.

Mr. Ken Cuddeback and Dr. Diana Green work with the adjunct faculty in the Telecommunications Administration major. We evaluate adjunct faculty regarding syllabi, student performance, classroom ambience, instructional materials, and performance. The evaluation is placed in the adjunct faculty's professional file. Any concerns are discussed with the department chair.

Ongoing Review and Professional Development

Faculty are provided opportunities in many avenues for professional development in areas of instruction, scholarship, and service. This includes Teaching and Learning Forum, the Office of Workplace Learning, and Online instruction.

The Teaching & Learning Forum was created by a group of faculty in 1992. The Forum offers retreats, book groups, workshops, collaborative projects, and other initiatives in support of faculty development. Activities are directed by the Teaching, Learning, and Assessment (TLA) Committee, a standing committee of the Faculty Senate, and the appointed coordinator who also serves as chair of the TLA Committee. The website is located at http://weber.edu/tlf.

All contract, salaried faculty are encouraged to submit proposals to the Research Scholarship and Professional Growth Committee and the Academic Resources and Computing Committee.

G. Support Staff, Administration, Facilities, Equipment, and Library

Adequacy of Staff

See Appendix C.

Adequacy of Administrative Support

The TBE Department receives excellent support from university departments such as WSU Online. The WSU Online staff has provided training and ongoing support. Many of the faculty has received Master Online Teacher certification by completing a series of workshops coordinated by the WSU Online office related to teaching techniques and current technology. The WSU Online office also has provided leadership on campus in regards to learning management systems (LMS). We have used WebCT, Blackboard, and Canvas in most of our courses. These LMS have led to efficiencies both in face-to-face courses as well as online courses.

At the college level, the department has received excellent technical support from staff, which keeps the classrooms functioning effectively. The faculty has three areas of responsibility: teaching, service, and research. High teaching loads and expectations of service limit the time available to complete research. Additional faculty positions would allow current faculty to have time for professional development as well as allow the program to offer more advanced courses that would make students more employable.

Adequacy of Facilities and Equipment

The TBE Department has been able to provide students with the latest software and exposure to state-of-the-art equipment and technology. The students have experience working on both PC and Mac computers. The relocation of the department to Elizabeth Hall has greatly improved working conditions as well as classrooms. At the college level, the department has received generous funding in support of software and equipment.

The TBE Department has the following facilities:

Building	Room	Room Type/Usage
	Number	
Elizabeth Hall	311 a & b	Computer Lab (25 Computer Workstations,
Ogden Campus		16 Computer Testing Stations)
	311 c & d	Audio/Visual Lab
	313	Multimedia Classroom (30 Mac Computers)
	318	TBE 1700 (CIL) Computer Classroom (40
		PC Computers)
	373	Conference Room
	383	Department Chair Office
	367, 368,	Faculty and Staff Offices
	371, 374,	
	378, 379,	
	380	
	372, 375,	Adjunct Offices
	377	
	383	Administrative Assistant Office
Building 3	338	Computer Classroom (30 PC Computers)
Ogden Campus		
Davis Campus	311	Computer Classroom (32 PC Computers)
-	315	Computer Classroom (32 PC Computers)

Adequacy of Library Resources

Several courses rely heavily on the library service Safari Books Online, which provides online access to hundreds of textbooks and resources related to telecommunications.

H. Relationships with External Communities

<u>Description of Role in External Communities</u>

The role of the Advisory Committee has been essential to the development of curriculum. The committee's recommendations help keep courses current and relevant and also provide input regarding quality of student work.

Local businesses and organizations provide support to the department in several ways. They provide internships, which are required for a telecommunication majors. The internship provides an opportunity for students to gain relevant work experience. Internship evaluation is used in assessment. Businesses also contact us to find students to do projects for them such as voice and data networking.

The students in the telecommunications program benefit from donations, business visits, and presentations by local and national businesses.

I. Results of Previous Program Reviews

Previous Program	Previous Program Review: October 2003									
Problem Identified	Action Taken:	Progress:								
Issue 1	The Telecommunications	The revisions have								
Challenge: The TBE telecommunication program needs to	Administration major is in the process of	been approved by the								
be aligned with some national or regional standards. It is	redoing courses in this major to align	department faculty,								
stated in the mission statement that	with industry needs, which will also	Telecommunications								
"the telecommunications, business education, and	align with ABET requirements.	Advisory Committee,								
business systems technologies majors are required to		and college								
meet standards of competency in a variety of technical	Action to Be Taken:	curriculum committee								
areas"	Once the major changes have been	and are currently at								
	approved, then the application process	the university								
Recommendation: The TBE telecommunication-intensive	can begin for ABET accreditation.	curriculum committee								
faculty need to seek a national telecommunications or	can begin for Abb r accreditation.	level pending								
related curriculum standards model. They need to use		approval.								
these standards as goals for their program.	Action Tolvon	Dwogwogg								
Issue 2	Action Taken:	Progress:								
Challenge: The gathering of information from interviews,	Data was collected from exit interviews,	Ongoing								
surveys, and forms is an important function. Further, a	and exit questionnaires from students									
consistent, long-term method of reporting these data	who were applying for graduation from									
needs to be established in order to identify goals that benefit all stakeholders.	2001 to 2010. In 2010, the department									
beliefit all stakeholders.	revised the methods of reporting									
	outcomes information. The faculty									
	determined that the internship/									
	practicum evaluations would provide									
	better outcome reporting information. Action to Be Taken:									
	Evaluation of outcomes and methods of									
	obtaining data is a continuous process.									

Issue 3	Action Taken:	Progress:
Challenge: Because the telecommunications program	TBE 4760, the internship course, is part	NA
requires an internship experience, it is a challenge for only	of the teaching load for TBE faculty. Dr.	
two people in the department to contact businesses, and	Diana Green or Mr. Ken Cuddeback	
effectively match students with businesses. This is in	supervise this course, which is the	
addition to their teaching and advising responsibilities.	internship experience.	
	Action to Be Taken:	
Recommendation: An internship/practicum coordinator	NA	
needs to be placed in the department. This person would		
have the responsibility of contacting and recruiting		
businesses for student internships. This person could		
coordinate and supervise student internships and		
practicums.		
Issue 4	Action Taken:	Progress:
Challenge: The courses are clearly laid out for students to	Courses can only be offered as often as is	NA
complete them in a timely fashion. However, many	economically feasible given the student	
courses are offered only once a year, and they must be	numbers. In order to ensure that	
taken concurrently with other courses. Therefore, if a	students take courses in a timely	
student is off by one class for any reason, he/she could	fashion, students receive advisement	
end up a year behind in the program.	from either Dr. Green or Mr. Cuddeback,	
	can view the WSU catalog to see when	
Recommendation: It might be possible to offer some form	courses are offered, and have access to	
of alternative for students in case they are unable to meet	Cattracks to see what courses are	
according to the recommended schedule. For example, in	completed and what courses still need to	
the Fall of their 2^{nd} year, students are to take 2710, 2720,	be taken to graduate.	
and 2730 concurrently. This constitutes 9 hours of	Action to Be Taken:	
classes, and they are to take 3000 level courses the next	NA	
semester. If for any reasons they have not finished their		
general education requirements, they should be		
concentrating on general education classes during this		

semester. That would mean that they would be off by one semester for TBE courses, but the courses they need will not be offered again until Spring. So some students may fall behind by a year because of the limits when the classes are offered. Issue 5	Action Taken:	Progress:
Challenge: Due to the rapid and constant changes in technology, faculty struggle at times to incorporate improvements based on the evidence of theory and practice.	Even during economically difficult times, the College of Applied Science and Technology has allowed faculty to travel at least once a year for training and/or professional conferences. WSU offers various training in IT, etc. Action to Be Taken: Continue to support faculty training through conferences and support materials.	NA NA
Issue 6	Action Taken:	Progress:
Challenge: There is clear evidence that the TBE program has a strategy for advising its major/minor students, but it is not continually assessed for its effectiveness.	WSU has implemented a Cattracks system Fall 2010, which allows students to view the same information the faculty can on student progress towards	The request has been made, but the component has not yet been developed.
Challenge: Because of the heavy teaching and preparation	graduation. This system has helped with	
load, plus other commitments in service and scholarship,	the advising process.	
faculty members expressed a desire to assess its advising	Action to Be Taken:	
process more regularly.	A request has been made to the	
	Cattracks developers to add a	
	component allowing announcements to	
Issue 7	be sent to specific majors. Action Taken:	Progress:
<i>Recommendation:</i> Continue to get the most out of advisory	The Telecommunications	On going
necommendation. Continue to get the most out of advisory	THE TELECOHIHIUMICACIONS	On going

committee. Continue to rotate representatives from the various organizations represented. Continue to press the committee for changes in the industry and to provide needed equipment for the labs. This has been done in the past and it has been effective. Of course, there is always room for improvement and the committee may have suggestions on how to improve their involvement with TBE. The challenge that continues to present itself to TBE is the rapid rate of change which is occurring in the industry, not only in technology but in public policy.	Administration Advisory Committee has been very active in changes to this major. Also, in the last year, the committee has met via telephone in order to make progress on the recent changes to the major, which are currently at the university curriculum committee. Members have been rotated on/off the committee as well. The committee has been very helpful in providing equipment for labs on occasion. Action to Be Taken: Annually evaluate the advisory committee membership and use the committee to improve the program.	
Issue 8	Action Taken:	Progress:
Challenge: The tenure-track faculty have excellent qualifications (both Academic and life-experience qualifications.) However, the instructor/adjunct faculty,	An attempt was made to hire a full-time, tenure position faculty member several years ago, but a qualified candidate	On hold
while excelling in real-world experience, does not meet	could not be found. Then, because of	
high academic standards. None of the 15 instructor	financial cutbacks, that position has	
positions is filled with Ph.D's., and only 26 % of the instructors have master's degrees. The others are	been on hold.	
instructors with Bachelor degrees. This may enable the	Faculty offices space is now available	
TBE program to find highly experienced instructors to	when a new faculty member is hired.	
help their students, but the academic qualifications are	Action to Be Taken:	
minimal.	Hire another full-time tenured faculty	
	C - T-	
Challenge: There is serious need for at least one other	for the Telecommunications Administration major as the economy	

faculty member to maintain the integrity of this program. The current faculty are excellent and do a tremendous job with their students. I was amazed at the number and quality of courses taught by so few faculty, in addition to the time spent advising and supervising internships. *Recommendation:** There is a desperate need for at least one other faculty in the telecommunications area. In addition, an office space for the new faculty would be required. *Challenge:** The department has seven contracted faculty and fifteen adjunct faculty. The department is facing, and will continue to face, staffing and scheduling challenges with continued growth. Added to this dilemma will be the accessibility between main campus and Davis campus commute. *Recommendation:** The TBE Department needs at least two more full-time faculty members. These faculty members can improve the quality of the program and help the department meet its goals by more course offerings,	improves and funds allow.	
course scheduling, course coordination, and content expertise.		
Issue 9	Action Taken:	Progress:
Challenge: The sharp growth of the program is an	In December of 2009, Elizabeth Hall was	Complete
indication that it is a successful program. The present	completed. Elizabeth Hall has faculty	r
building and physical facilities are a constraint to students,	offices for the current faculty as well as	
faculty, and curriculum goals.	shared adjunct faculty office space.	
	Elizabeth Hall has a conference room	

Recommendation: The TBE Department needs relief from the shortage of adequate classroom and faculty office space in order to maintain its momentum and achieve its program goals. Ideally, these classrooms and offices should be housed in the same building to increase faculty collaboration, to provide student advisement, and to increase interaction between students and their instructors. Challenge: Room size is a challenge in the rooms on the main campus. Teaching labs are heavily used, and they are crowded. Students are forced to sit close together and there is very little space for students to put working materials. Recommendation: It would greatly benefit the TBE Department and help it achieve its goals if it were located in one or two buildings closely linked to each other. The ideal location would be in Building 2. Printing services should be relocated to provide more classroom and office space for the TBE Department.	with video conferencing capability, a computer lab and testing area, a multimedia classroom, and a computer literacy classroom. In addition, Building 3, Room 338, is a computer classroom used for Telecommunication courses and other TBE Department courses. Davis Campus has two classrooms dedicated to computer literacy and Telecommunications courses. Although these classrooms are not in the same building or campus, Dr. Green and Mr. Cuddeback have offices in Elizabeth Hall. Mr. Cuddeback also has an office at the Davis Campus and can advise students at either campus. Action to Be Taken: NA	
Issue 10	Action Taken:	Progress:
Challenge: Because of budget and operational constraints, there never seems to be enough support staff to do all that is needed. There are many tools available to faculty and staff but keeping course materials updated in the most current formats, media, software revisions, testing tools, Web Access techniques, etc. seems to be endless. By the time one gets around to updating their materials, it is time to change or update again. In the past three years, there	The department administrative assistant position changed from a 9-month position to an 12-month position, which has greatly increased the support for oncampus programs during the summer months. Action to Be Taken: NA	Completed

has been a tremendous effort to provide support staff and lab assistants to help ease the load and to keep up with change. Recommendation: There needs to be increased financial support for the summer months for on-campus programs. Issue 11	Action Taken:	Progress:
Challenge: Library support through its collection of publications and online access is good. Online resources are very good for the TBE programs. Library support, as these programs expand, also needs to expand to meet the information needs of students and faculty members.	The library currently provides an on-line resource for reading materials to help faculty keep current. The name of this program is Safari Books Online. Action to Be Taken: NA	Completed
Issue 12	Action Taken:	Progress:
Challenge: Faculty and student parking is a challenge for those who must park far away from the building and ride the shuttle. These people can be late for classes and it can be disruptive. Recommendation: The University needs to develop a dependable and convenient transportation system for students and faculty on campus who ride the shuttle and for students and faculty who travel to the Davis campus.	The university provides a shuttle from the Dee Events Center to the main campus. Most students choose either to take courses at the main campus during the day or evening courses at the Davis Campus or Main Campus. A transportation system between campuses has not been an issue. Action to Be Taken: NA	Completed

J. Action Plan for Ongoing Assessment Based on Current Self-Study Findings

Action Plan for Evidence of Learning Related Findings

Problem Identified	Action to Be Taken
Issue 1	Current 5 Year Program Review: 2012
	Year 1 Action to Be Taken:
After the Telecommunications curriculum	Change major name from Telecommunications Administration to Network
changes have been approved, then the program	Management Technologies.
needs to seek ABET accreditation.	Get curriculum changes completed.
	Year 2 Action to Be Taken:
	Apply for ABET accreditation.
	Year 3 Action to Be Taken:
	Complete ABET accreditation self-study.
	Year 4 Action to Be Taken:
	Receive ABET accreditation.
Issue 2	Current 5 Year Program Review: 2012
	Year 1 Action to Be Taken:
Gather artifacts for assessment.	Collect artifacts from TBE 2415
	Year 2 Action to Be Taken: Collect artifacts from TBE 2435 and TBE 3300

Action Plan for Staff, Administration, or Budgetary Findings

Problem Identified	Action to Be Taken
Issue 1	Current 5 Year Program Review: 2012
Add an additional faculty member for the Telecommunication Administration major.	Year 1 Action to Be Taken: Request an additional tenure-track faculty position for the Telecommunications Administration Major.

K. Summary of Artifact Collection Procedure

Artifact	Learning Outcome Measured	When/How Collected?	Where Stored?
TBE 2415		Once a year	Electronic copies on S
			drive under
			Assessment
TBE 2435		Once a year	Electronic copies on S
			drive under
			Assessment
TBE 3300		Once a year	Electronic copies on S
			drive under
			Assessment

Summary Information (as needed)

APPENDICES

Appendix A: Student and Faculty Statistical Summary for Department

	2006-07	2007-08	2008-09	2009-10	2010-11
Student Credit Hours Total	14,402	17,269	14,718	15,882	16,323
Student FTE Total	480.07	575.63	490.58	529.40	544.10
Student Majors AAS Degree	25	18	16	10	18
Student Majors BS Degree	68	62	74	68	71
Department Graduates	43	26	36	33	41
Certificate	0	0	0	0	1
Associate Degree	19	3	11	8	10
Bachelor Degree	24	23	25	25	30
Student Demographic Profile	129	139	157	153	175
Female	43	49	51	47	51
Male	86	90	106	106	124
Faculty FTE Total	15.22	15.58	15.62	16.09	NA
Adjunct FTE	7.72	8.08	9.05	8.98	NA
Contract FTE	7.50	7.50	6.57	7.11	NA
Student/Faculty Ratio	31.54	36.95	31.41	32.90	NA

Note: Data provided by Institutional Research

Appendix B: Contract/Adjunct Faculty Profile

Name	Gender	Ethnicity	Rank	Tenure	Highest	Years of	Areas of Expertise
				Status	Degree	Teaching	
Ms. Laura Anderson	F	Caucasian	Instructor	NonTenure Track	Master's	19	Business/Multimedia
Mr. Kenneth Cuddeback	M	Caucasian	Associate	Tenured	Master's	17	Cisco, Security,
			Professor				Networking,
							Network Server Admin
							Internships
							Advisor
Dr. Diana Green	F	Caucasian	Professor	Tenured	Doctorate	29	Bus Communications
							Supervisory InfoTech
							Spreadsheets
							Internships
							Advisor
Dr. Laura MacLeod	F	Caucasian	Associate	Tenured	Doctorate	30	Multimedia
			Professor				
Ms. Joyce Porter	F	Caucasian	Instructor	NonTenure Track	Master's	37	Web Design
Dr. Allyson Saunders	F	Caucasian	Professor	Tenured	Doctorate	29	Bus Communications
Dr. Alden Talbot	M	Caucasian	Professor	Tenured	Doctorate	43	Advisor
Mr. Thomas Bell	M	Caucasian	Adjunct Faculty	NA	Master's	1	Internet/Database
							Integration
Mr. Scott Checketts	M	Caucasian	Adjunct Faculty	NA	Master's	7	Fiber and Wireless
Ms. Sandra Jensen	F	Caucasian	Adjunct Faculty	NA	Master's	3	Bus Communication
Mr. Rex Knowles	M	Caucasian	Adjunct Faculty	NA	Bachelor's	11	Cyber Policy and
							Ethics
Ms. Carole Lapine	F	Caucasian	Adjunct Faculty	NA	Master's	13	CIL
							Bus Communication
Ms. Jennifer Morgan	F	Caucasian	Adjunct Faculty	NA	Master's	6	CIL

							Intro to Operating Systems
Mr. Darin Myers	M	Caucasian	Adjunct Faculty	NA	Master's	11	Digital Switching
Mr. Steve Pecorella	M	Caucasian	Adjunct Faculty	NA	Bachelor's	9	Digital Switching
Mr. Mark Sagers	M	Caucasian	Adjunct Faculty	NA	Bachelor's	20	Transport Media
Mr. Randy Swalberg	M	Caucasian	Adjunct Faculty	NA	Master's	20	Data Network Design
Mr. Larry Welch	M	Caucasian	Adjunct Faculty	NA	Bachelor's	13	Voice Network Design

Note: CIL (Computer and Information Literacy)

Appendix C: Staff Profile

Name	Gender	Ethnicity	Job Title	Years of	Areas of Expertise
				Employment	
Angela Christensen	F	Caucasian	Administrative	2	Office Support
Classified Staff			Assistant		Coadvisor, PBL
Carole Barrios Lapine	F	Caucasian	Computer Literacy	13	CIL
Professional Staff			Administrator		Business Communication
					Computer Software

Appendix D: Financial Analysis Summary

Department of Telecommunications & Business Education								
Cost	06-07	07-08	08-09	09-10	10-11			
Direct Instructional Expenditures	895,026	838,870	888,107	894,476	928,019			
Cost Per Student FTE	1,864	1,457	1,810	1,690	1,706			
Funding	06-07	07-08	08-09	09-10	10-11			
Appropriated Fund	754,391	784,485	801,650	808,469	815,897			
Other:								
Special Legislative Appropriation								
Grants of Contracts					7,026			
Special Fees/Differential Tuition	140,635	54,385	86,457	86,007	105,095			
Total	895,026	838,870	888,107	894,476	928,019			

Note: Data provided by Provost's Office

Appendix E: External Community Involvement Names and Organizations

Name	Organization		
Jeff Stokes (Chair)	Director, Project Management-Enterprise Network		
	Services, Convergys Corp.		
	801.629.6556		
	Jeff.stokes@convergys.com		
Baxter Blass	Senior Engineer, Sorenson Communications		
	801.644.5341		
	inbucket@gmail.com		
Doug Burgin	Enterprise Engineer, Consonus		
	801.299.0331 (home) 801.617.2993		
	burginz@comcast.net		
Kevin Lethco	IHC		
	801.442.6530 (work) 801.599.0132 (cell)		
	klethco@ihc.com		
John P. Jurkowski	Airway Transportation System Specialist		
	SSC Coordinator Federal Aviation Administration		
	801.589.5586 (home) 801.325.9889 (work)		
	jpjurkowski@msn.com		
Mike Martin	Questar		
	801.324.1938		
	mike.martin@questar.com		
Darin Myers	PacificCorp		
	801.220.4042 (cell) 801.597.9264 (work)		
	Darin.Myers@PacifiCorp.com		
Russell Williams	801.775.8427 (home) 801.560.0680 (cell)		
	Russell.williams@gmail.com		
Mark Sagers	Area Manager, AT&T		
	801.967.1295		
	msagers@att.com		
Randy Swalberg	Qwest		
	801.575.1070		
	Randy.swalberg@qwest.com		

Appendix F: External Community Involvement Financial Contributions

Organization	Amount	Туре
XO Company (voice switching equipment)	\$20,000	Donation