

WSU Five-Year Program Review
Self-Study
Cover Page

Department: Telecommunications and Business Education

Program: Telecommunications Administration Major

Semester Submitted: Fall 2011

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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 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, 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.

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.

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: 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: <table border="1"> <caption>Writing Assessment Data</caption> <thead> <tr> <th>Year</th> <th>Score</th> </tr> </thead> <tbody> <tr><td>Fall 2008</td><td>3.3</td></tr> <tr><td>Spring 2009</td><td>3.7</td></tr> <tr><td>Summer 2009</td><td>3.9</td></tr> <tr><td>Fall 2009</td><td>4.6</td></tr> <tr><td>Spring 2010</td><td>4.1</td></tr> <tr><td>Summer 2010</td><td>4.3</td></tr> <tr><td>Fall 2010</td><td>3.6</td></tr> <tr><td>Spring 2011</td><td>3.9</td></tr> <tr><td>Summer 2011</td><td>3.3</td></tr> </tbody> </table>	Year	Score	Fall 2008	3.3	Spring 2009	3.7	Summer 2009	3.9	Fall 2009	4.6	Spring 2010	4.1	Summer 2010	4.3	Fall 2010	3.6	Spring 2011	3.9	Summer 2011	3.3	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
	Year	Score																							
Fall 2008	3.3																								
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	Learning Outcome 2: Students will maintain a score of 3.5 or above on the oral communication assessment.	Measure 2: Oral Communication Assessment Rubric	Measure 2: <table border="1"> <caption>Oral Communication Assessment Data</caption> <thead> <tr> <th>Year</th> <th>Score</th> </tr> </thead> <tbody> <tr><td>Fall 2008</td><td>4.5</td></tr> <tr><td>Spring 2009</td><td>3.8</td></tr> <tr><td>Summer 2009</td><td>5.0</td></tr> <tr><td>Fall 2009</td><td>4.4</td></tr> <tr><td>Spring 2010</td><td>4.1</td></tr> <tr><td>Summer 2010</td><td>4.4</td></tr> <tr><td>Fall 2010</td><td>4.3</td></tr> <tr><td>Spring 2011</td><td>4.2</td></tr> <tr><td>Summer 2011</td><td>4.0</td></tr> </tbody> </table>	Year	Score	Fall 2008	4.5	Spring 2009	3.8	Summer 2009	5.0	Fall 2009	4.4	Spring 2010	4.1	Summer 2010	4.4	Fall 2010	4.3	Spring 2011	4.2	Summer 2011	4.0	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 communication rubric to improve the sub scores
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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																																			
<p><i>Goal 2:</i> Students will possess effective computational skills</p>	<p><i>Learning Outcome 2:</i> Students will accurately use formulas and functions to perform business applications.</p>	<p><i>Measure 1:</i> Internship Employer and Student Forms</p>	<p align="center">Computational Skills</p> <table border="1"> <thead> <tr> <th rowspan="2">Academic Year</th> <th colspan="2">Accurately uses formulas and functions to perform business applications</th> <th colspan="2">Makes only a few errors with formulas and functions to perform business applications</th> <th colspan="2">Makes numerous errors with formulas and functions to perform business applications</th> <th colspan="2">NA</th> </tr> <tr> <th>E</th> <th>S</th> <th>E</th> <th>S</th> <th>E</th> <th>S</th> <th>E</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>2009/2010</td> <td>8</td> <td>5</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>2010/2011</td> <td>17</td> <td>17</td> <td>3</td> <td>7</td> <td>0</td> <td>0</td> <td>4</td> <td>0</td> </tr> </tbody> </table> <p>E=Employer S=Student</p>	Academic Year	Accurately uses formulas and functions to perform business applications		Makes only a few errors with formulas and functions to perform business applications		Makes numerous errors with formulas and functions to perform business applications		NA		E	S	E	S	E	S	E	S	2009/2010	8	5	0	0	0	0	0	0	2010/2011	17	17	3	7	0	0	4	0	<p><i>Measure 1:</i> Of the employers who rated students' computational skills, 25 out of 28 (89%) rated students in the highest level. Of the students who rated their own computational skills, 22 out of 29 (76%) rated themselves in the highest level.</p>	<p><i>Measure 1:</i> To continue to have employers rate student's computational skills. To continue to have students rate their computational skills.</p>
Academic Year	Accurately uses formulas and functions to perform business applications		Makes only a few errors with formulas and functions to perform business applications		Makes numerous errors with formulas and functions to perform business applications		NA																																	
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<p><i>Goal 3:</i> Students will possess effective knowledge and skills</p>	<p><i>Learning Outcome 3:</i> Students will work beyond the level of educational background.</p>	<p><i>Measure 1:</i> Internship Employer and Student Forms</p>	<p><i>Measure 1:</i></p> <p align="center">Knowledge and Skills</p> <table border="1"> <thead> <tr> <th rowspan="2">Academic Year</th> <th colspan="2">Works beyond level of educational background</th> <th colspan="2">Works on level comparable to educational background</th> <th colspan="2">Works on level below educational background</th> </tr> <tr> <th>E</th> <th>S</th> <th>E</th> <th>S</th> <th>E</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>2009/2010</td> <td>7</td> <td>3</td> <td>6</td> <td>8</td> <td>0</td> <td>0</td> </tr> <tr> <td>2010/2011</td> <td>16</td> <td>14</td> <td>8</td> <td>10</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>E=Employer S=Student</p>	Academic Year	Works beyond level of educational background		Works on level comparable to educational background		Works on level below educational background		E	S	E	S	E	S	2009/2010	7	3	6	8	0	0	2010/2011	16	14	8	10	0	0	<p><i>Measure 1:</i> Of the employers who rated students' knowledge and skills, 23 out of 37 (62 %) rated students in the highest level. Of the students who rated their own knowledge and skills, 17 out of 35 (49%) rated themselves in the highest level.</p>	<p><i>Measure 1:</i> To continue to have employers rate student's knowledge and skills. To continue to have students rate their knowledge and skills.</p>								
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2010/2011	16	14	8	10	0	0																																		
<p><i>Goal 4:</i> Students will possess effective decision-making and problem-solving skills</p>	<p><i>Learning Outcome 4:</i> Students will identify most problems and implement solutions.</p>	<p><i>Measure 1:</i> Internship Employer and Student Forms</p>	<p><i>Measure 1:</i></p> <p align="center">Problem Solving</p> <table border="1"> <thead> <tr> <th rowspan="2">Academic Year</th> <th colspan="2">Identifies most problems and implements solutions</th> <th colspan="2">Identifies some problems and implements some solutions</th> <th colspan="2">Unable to identify problems and implement solutions</th> </tr> <tr> <th>E</th> <th>S</th> <th>E</th> <th>S</th> <th>E</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>2009/2010</td> <td>13</td> <td>8</td> <td>0</td> <td>3</td> <td>0</td> <td>0</td> </tr> <tr> <td>2010/2011</td> <td>19</td> <td>20</td> <td>5</td> <td>4</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>E=Employer S=Student</p>	Academic Year	Identifies most problems and implements solutions		Identifies some problems and implements some solutions		Unable to identify problems and implement solutions		E	S	E	S	E	S	2009/2010	13	8	0	3	0	0	2010/2011	19	20	5	4	0	0	<p><i>Measure 1:</i> Of the employers who rated students' problem-solving skills, 32 out of 37 (86 %) rated students in the highest level. Of the students who rated their own problem-solving skills, 28 out of 35 (80%) rated themselves in the highest level.</p>	<p><i>Measure 1:</i> To continue to have employers rate student's problem-solving skills. To continue to have students rate their problem-solving skills.</p>								
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2009/2010	13	11	0	0	0	0	0	0	0	0																																														
2010/2011	21	22	2	2	0	0	1	0																																																
Goal 5: This outcome is not assessed for this major.																																																								
Goal 6: Students will possess knowledge of ethics and professionalism	Learning Outcome 6: Students will demonstrate excellent work ethics.	Measure 1: Internship Employer and Student Forms	<p>Measure 1:</p> <table border="1"> <thead> <tr> <th rowspan="3">Academic Year</th> <th colspan="6">Ethics</th> </tr> <tr> <th colspan="2">Demonstrates excellent work ethics</th> <th colspan="2">Demonstrates good work ethics</th> <th colspan="2">Demonstrates poor work ethics</th> </tr> <tr> <th colspan="2">E=Employer</th> <th colspan="2">S=Student</th> <th colspan="2">E S</th> </tr> </thead> <tbody> <tr> <td>2009/2010</td> <td>13</td> <td>9</td> <td>0</td> <td>2</td> <td>0</td> <td>0</td> </tr> <tr> <td>2010/2011</td> <td>22</td> <td>23</td> <td>2</td> <td>1</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Academic Year	Ethics						Demonstrates excellent work ethics		Demonstrates good work ethics		Demonstrates poor work ethics		E=Employer		S=Student		E S		2009/2010	13	9	0	2	0	0	2010/2011	22	23	2	1	0	0	Measure 1: Of the employers who rated students' ethics, 35 out of 37 (95%) rated students in the highest level. Of the students who rated their own ethics, 32 out of 35 (91%) rated themselves in the highest level.	Measure 1: To continue having employers rate student's work ethics. To continue having students rate their work ethics.																		
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*At least one measure per objective must be a direct measure. Indirect measures may be used to supplement evidence provided via the direct measures.

Academic Advising

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. 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. 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.

Faculty

Thirteen faculty members (See Appendix C) teach regularly in the telecommunications administration program. 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.

Relationships with External Communities

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.

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 Status	Highest Degree	Years of Teaching	Areas of Expertise
Ms. Laura Anderson	F	Caucasian	Instructor	NonTenure Track	Master's	19	Business/Multimedia
Mr. Kenneth Cuddeback	M	Caucasian	Associate Professor	Tenured	Master's	17	Cisco, Security, 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 Professor	Tenured	Doctorate	30	Multimedia
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 Employment	Areas of Expertise
Angela Christensen Classified Staff	F	Caucasian	Administrative Assistant	2	Office Support Coadvisor, PBL
Carole Barrios Lapine Professional Staff	F	Caucasian	Computer Literacy Administrator	13	CIL 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) jjjurkowski@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	Type
XO Company (voice switching equipment)	\$20,000	Donation