

LSC Use Only No:	LSC Action-Date:	UWUCC USE Only No.	UWUCC Action-Date:	Senate Action Date:
		02-81c	App - 4/15/03	App 4/29/03

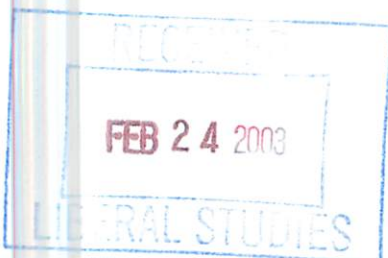
Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

Contact Person LeAnn Wilkie	Email Address Wilkie@iup.edu
Proposing Department/Unit Technology Support & Training	Phone 357-3003

Check all appropriate lines and complete information as requested. Use a separate cover sheet for each course proposal and for each program proposal.

1. Course Proposals (check all that apply) <input type="checkbox"/> New Course <input type="checkbox"/> Course Prefix Change <input type="checkbox"/> Course Deletion <input checked="" type="checkbox"/> Course Revision <input type="checkbox"/> Course Number and/or Title Change <input type="checkbox"/> Catalog Description Change																															
BTST 310 Telecommunications																															
<u>Current</u> Course prefix, number and full title	<u>Proposed</u> course prefix, number and full title, if changing																														
2. Additional Course Designations: check if appropriate <input type="checkbox"/> This course is also proposed as a Liberal Studies Course. <input type="checkbox"/> Other: (e.g., Women's Studies, Pan-African) <input type="checkbox"/> This course is also proposed as an Honors College Course.																															
3. Program Proposals <input type="checkbox"/> New Degree Program <input type="checkbox"/> Program Title Change <input type="checkbox"/> Other <input type="checkbox"/> New Minor Program <input type="checkbox"/> New Track <input type="checkbox"/> Catalog Description Change <input type="checkbox"/> Program Revision																															
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4. Approvals <table border="1" style="width:100%"> <thead> <tr> <th></th> <th></th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Department Curriculum Committee Chair(s)</td> <td>LeAnn Wilkie</td> <td>2-14-03</td> </tr> <tr> <td>Department Chair(s)</td> <td>Shonda Gul</td> <td>2-19-03</td> </tr> <tr> <td>College Curriculum Committee Chair</td> <td>John Williams</td> <td>2-20-03</td> </tr> <tr> <td>College Dean</td> <td>R. Adams</td> <td>2/20/03</td> </tr> <tr> <td>Director of Liberal Studies *</td> <td></td> <td></td> </tr> <tr> <td>Director of Honors College *</td> <td></td> <td></td> </tr> <tr> <td>Provost *</td> <td></td> <td></td> </tr> <tr> <td>Additional signatures as appropriate: (include title)</td> <td></td> <td></td> </tr> <tr> <td>UWUCC Co-Chairs</td> <td>Gail S. Schuest</td> <td>4/15/03</td> </tr> </tbody> </table>				Date	Department Curriculum Committee Chair(s)	LeAnn Wilkie	2-14-03	Department Chair(s)	Shonda Gul	2-19-03	College Curriculum Committee Chair	John Williams	2-20-03	College Dean	R. Adams	2/20/03	Director of Liberal Studies *			Director of Honors College *			Provost *			Additional signatures as appropriate: (include title)			UWUCC Co-Chairs	Gail S. Schuest	4/15/03
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* where applicable



Course Revision: BTST 310 Telecommunications

Part II. Description of Curriculum Change

1. Syllabus of Record.

The new syllabus of record for this revised course is attached in Appendix A.

2. Summary of the proposed revisions:

- a. Course objectives were changed to reflect current technology.
- b. A specific "writing intensive" objective was added.
- c. Items in the course outline were changed to reflect current technology.
- d. Items were aligned with the course objectives.
- e. Evaluation methods were delineated.
- f. Bibliography was updated.

3. Justification/rationale for the changes.

Many changes have occurred within telecommunications since the last revision to the syllabus of record. Therefore, course content was updated to reflect those changes.

4. Old syllabus of record

The old syllabus of record is attached in Appendix B.

5. Liberal Studies course approval.

These changes do not affect the Liberal Studies requirements.

Appendix A: New Syllabus of Record

BTST 310 Telecommunications

3 class hours
0 lab hours
3 credits
(3c-01-3cr)

Prerequisite: BTED/COSC/IFMG 101

I. Course Description

Provides an introduction to telecommunications in the business environment. Includes an overview of electronic communication systems including a conceptual framework as well as hands-on experience. Concepts of telecommunications technology, applications, and management as they apply to business and industry will be addressed.

II. Course Objectives

Upon successful completion of this course, students will be able to:

1. Discuss the evolution of telecommunications and its future implications.
2. Analyze transmission and reception processes in telecommunications.
3. List hardware and software used in a data communications system.
4. Analyze network configurations and their management.
5. State the role of the public telephone system and other public carriers.
6. Discuss various trends and show evidence of a conceptual understanding of emerging technologies.
7. Show evidence of a synthetic understanding of the impact of various societal and ethical issues surrounding telecommunications.
8. Improve and enhance writing ability according to set standards.

III. Course Outline

- | | | |
|----|----------------------------------------------|---------|
| A. | Telecommunications Overview | 3 hours |
| | 1. Evolution | |
| | 2. Technologies | |
| | 3. Major issues in the industry | |
| B. | Transmission and Reception Fundamentals | 4 hours |
| | 1. Voice transmission principles | |
| | 2. Analog/digital signal conversion | |
| | 3. Transmission rates, channels, modes | |
| | 4. Transmission media and impairments | |
| | 5. Codes, circuits, standards, and protocols | |

C.	Data Communications Hardware Software/Networks	4 hours
	1. Hardware	
	2. Software	
	3. Conducted/radiated media	
	Exam One Exam will feature objective questions as well as a writing portion	1 hour
D.	Network Configurations and Management	9 hours
	1. Technology and standards	
	2. Classification	
	3. LANs, MANs, and WANs	
	4. Research writing project	
E.	Telephone Systems	2 hours
	1. Telephone components	
	2. Telecommunications network	
	3. Local, long-distance carriers and services	
	4. Private Branch Exchanges (PBX)	
	5. Centrex services	
F.	Trends/Emerging Technologies	12 hours
	1. Microwave and Satellite Communications	
	2. Electronic Mail	
	3. Teleconferencing	
	4. Wireless Communications	
G.	Ethics and Support	7 hours
	1. Intellectual property	
	2. ADA	
	3. Alternatives	
	Final Activity During Final Exam Week	2 hours
	Total hours:	44 hours

IV. Evaluation Methods

The final grade will be determined as follows:

Two exams 40% Each exam will consist of one half objective type questions and one half shorter essays dealing with primarily factual questions

Homework	30%	A research article will be completed for each chapter. Responses will be a minimum of one page, but no more than three pages.
Projects and participation:	30%	A 5000 word (15-20 page) research project will involve a case study and analysis of emerging technology.

The standard university grading scale will be used:

Grade	Percentage
A	100 to 90%
B	89 to 80%
C	79 to 70%
D	69 to 60%
F	59% and below

V. Attendance Policy

The university expects all students to attend class. The instructor recognizes the students' need to miss class because of illness or personal emergency and as such, students will be allowed to miss three hours worth of class time without penalty.

VI. Required Texts and Materials

Shelly, G.B., Cashman, T.J., & Serwatka, J.A. (2001). *Business data communications introductory concepts and techniques* (3rd ed.). Boston, MA: Course Technologies.

To complete assignments, students must maintain and utilize a web-based e-mail account and have electronic storage access.

VII. Bibliography

Cole, M. (2002). *Introduction to telecommunications: Voice, data, and the internet* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.

- Dodd, A.Z. (2002). *The essential guide to telecommunications* (3rd ed.). Upper Saddle River, NJ: Prentice Hall PTR.
- Gehris, D.O., & Szul, L.F. (2002). *Communication technologies*. Upper Saddle River: Prentice Hall.
- Moore, M.S., Pritsky, N.T., Riggs, C., & Southwick, P.V. (2002). *Telecommunications: A beginner's guide*. Berkeley, CA: McGraw-Hill/Osborne.
- Panko, R.R. (2002). *Business data networks and telecommunications* (4th ed.). Upper Saddle River, NJ: Prentice Hall.
- Shelly, G.B., Cashman, T.J., & Serwatka, J.A. (2001). *Business data communications: Introductory concepts and techniques* (3rd ed.). Boston, MA: Course Technology.
- Stair, R.M., & Reynolds, G.W. (2001). *Principles of information systems: A managerial approach* (5th ed.). Boston, MA: Course Technology.
- Stamper, D.A., & Case, T.L. (2003). *Business data and communications* (6th ed.). Upper Saddle River, NJ: Prentice Hall.
- Wetteroth, D. (2002). *OSI reference model for telecommunications*. New York, NY: McGraw-Hill.
- White, C.M. (2002). *Data communications and computer networks: A business user's approach* (2nd ed.). Boston, MA: Course Technology.

Appendix B: Old Syllabus of Record

BTST 310 Telecommunications

3 class hours
0 lab hours
3 lecture hours
(3c-01-3sh)

Prerequisite: BTED/COSC/IFMG 101

Catalog Description

Provides an introduction to telecommunications in the business environment. Includes an overview of electronic communication systems including a conceptual framework as well as hands-on experience. Concepts of telecommunications technology, applications, and management as they apply to business and industry will be addressed.

Course Objectives

Upon successful completion of this course, students will understand the:

- evolution of telecommunications and its future implications.
- transmission and reception processes in telecommunications.
- hardware and software used in a data communication system.
- network configurations and their management.
- role of the public telephone system and other public carriers.

Course Outline

- A. Telecommunications Overview (2 hrs.)
 - 1. Evolution
 - 2. Technologies
 - 3. Major issues in the industry
 - 4. Changing role of the telecommunications manager

- B. Transmission Fundamentals (3 hrs.)
 - 1. Voice transmission principles
 - 2. Signal conversion
 - 3. Transmission rates, channels, modes
 - 4. Transmission media and impairments
 - 5. Codes, circuits and protocols

- C. Telephone Basics (2 hrs.)
 - 1. Telephone components
 - 2. Basic telephone operations
 - 3. Exchange services
 - 4. Telecommunications network

- D. Public Telephone system (3 hrs.)
 - 1. Public Switched Telephone Network (PSTN)
 - 2. Local Access and Transport Areas (LATAs) or Market Service Areas (MSAs)
 - 3. Long—distance carriers and services
 - 4. Private lines

- E. Business Telephone Systems (2 hrs.)
 - 1. Interconnect Industry
 - 2. Key Telephone Systems
 - 3. Private Branch Exchanges (PBX)
 - 4. Centrex services

- F. Communications Networks (3hrs.)
 - 1. Technology and standards
 - 2. Classification by topology, ownership, purpose and geography
 - 3. Alternatives to LANs
 - 4. Design and Implementation

- G. Data Communications Hardware and Software (3 hrs.)
 - 1. Data terminals
 - 2. Modems/DOVs
 - 3. Software packages

- H. Microwave and Satellite Communications (3 hrs.)
 - 1. Microwave relay
 - 2. Satellite communications
 - 3. Teleports

- I. Electronic Mail (3 hrs.)
 - 1. Telex
 - 2. Computer-Based Messaging Systems (CBMS)
 - 3. Electronic mail standards
 - 4. Electronic Data Interchange (EDI)
 - 5. IUP's Mail System
 - 6. User Manuals/Procedures

- J. Voice Processing (3 hrs.)
 - 1. Technology
 - 2. Functions and applications
 - 3. Systems

- K. Facsimile (1 1/2 hrs.)
 - 1. Technology and standards
 - 2. Equipment features
 - 3. Public facsimile services

4. Applications
- L. Videotex and Teletext (1 1/2 hrs.)
- M. Teleconferencing (3 hrs.)
1. Audio conferencing and audiographics
 2. Two-way videoconferencing
 3. Business television
 4. Computer conferencing
 5. Planning, conducting, and evaluating
- N. Mobile Communications (3 hrs.)
1. Services
 2. Radio paging
 3. Two-way radio
 4. Mobile telephone service
- O. Telecommunications Management (2 hrs.)
1. Need
 2. Responsibilities
 3. Security
 4. Issues
- P. Future Directions in Telecommunications (1 hr.)
- Q. Three in-class exams (3 hrs.) Total hours: 42 hours

***Note: Hours devoted to topics will vary depending upon the advances in technology.**

Teaching Method: This course will be taught using lecture, hands—on Internet, case studies, videos, readings, and special projects. Homework assignments are due during or before the class period for which they are assigned. No late assignments will be accented without previous agreement.

Many of the homework assignments will require use of a computer with a modem to log in to IUP's mainframe. If you do not have one at home, you should anticipate spending additional out-of-class time in the lab to do assignments.

Required texts and materials:

Mitchell, William, Robert Hendricks, and Leonard Sterry. Telecommunications: Systems and Applications. (St. Paul, MN: Paradigm Publishing, 1993).

Copies Now materials, including EFF's Guide to the Internet.

A number of 3.5" diskettes, pencil/pen and notebook are the only additional supplies needed for the class.

Grading:

Three exams	60%
Homework	20%
Case Studies and Participation	20%

(90—100% = A; 80—89% = B; 70—79% = C; 60—69% = D; Below = F)