

I. CATALOG DESCRIPTION:

A. Department Information:

Division:	Humanities
Department:	Radio/Television Film
Course ID:	RTVF 107
Course Title:	Introduction to Communications Technology
Units:	3
Lecture:	3 Hours
Laboratory:	None

B. Catalog and Schedule Description: This course identifies current communications technologies available and how they are used effectively in the entertainment industry. These technologies include telephones and telephone lines, personal computers, computer networks (Internet and Intranets), satellites, broadcast television, cable, fiber optics, digital film, microwave, and radio.

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: One

III. EXPECTED OUTCOMES:

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

- A. Compare the difference between analog and digital signaling
- B. Illustrate the communications process
- C. Identify and explain uses for various types of communications technologies
- D. Compare and contrast the various technologies
- E. Define and explain the broadcast spectrum
- F. Name, describe, and classify various wire and wireless technologies, and explain their uses in the entertainment industry
- G. Define broadcast communications and explain its uses in the entertainment industry
- H. Define cable and satellite communications and explain its uses in the entertainment industry
- I. Define film, digital film, and explain its uses in the entertainment industry
- J. List various computer technologies and explain their uses in the entertainment industry
- K. Define mobile communications (Cellular) and explain its uses in the entertainment industry
- L. Discuss the future of communications technologies
- M. Identify and evaluate the various markets for communications technology hardware and software
- N. Evaluate the job market for the various technologies

IV. COURSE CONTENT:

- A. Analog/Digital signaling
 - 1. Frequency
 - 2. Amplitude
 - 3. Amplifiers vs. repeaters
 - 4. Signal degradation/loss
 - 5. Quality comparison
 - 6. Recording/reading methods
 - 7. Linear vs. nonlinear
- B. Illustrate the communications process
 - 1. Sender
 - 2. Message
 - 3. Encoding
 - 4. Medium
 - 5. Receiver
 - 6. Decoding
- C. Identify the various types of communications technologies
 - 1. Telephones and telephone lines,

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- a) DSL (and all subcategories thereof)
- b) Fiber optics (and all subcategories)
- c) Twisted pair
2. Personal computers,
 - a) CPU
 - b) Memory
 - c) Speed
3. Computer networks (Internet and Intranets)
4. Satellites,
5. Broadcast television
 - a) Low power
 - b) Commercial
 - c) Digital
 - i. Encoding
 - ii. Delivery methods
 - d) HDTV/SDTV/NTSC
6. Cable television
7. Interactive television
8. Digital film
9. Microwave/radio
10. Infrared
- D. Explain the uses for various types of communications technologies
 1. Entertainment
 2. Information
- E. Compare and contrast the various technologies
 1. Analog/digital
 2. Cost
 3. Data type (e.g., voice, graphic, animation, etc)
- F. Multiplexing
- G. The broadcast spectrum
 1. Frequency
 2. Amplitude
 3. Modulation
 4. Spectrum
- H. Wire technologies
 1. Twisted pair
 2. Fiber optics
 3. Coaxial
- I. Computer technologies
 1. Internet
 2. WANS/LANS/MANS
 3. Wireless communications
 4. Storage devices
- J. Mobile communications (Cellular)
- K. Discuss the future of communications technologies
 1. Entertainment
 2. Information
- L. Identify and evaluate the various markets for communications technology hardware and software in the entertainment industry
- M. Evaluate the job market for the various technologies

V. METHODS OF INSTRUCTION:

The course is designed under the lecture/discussion format. The instruction methods to be used may include:

- A. Lecture
- B. Read text and Other Sources

- C. Class and Group Discussion
- D. Oral and written analysis of emerging technologies
- E. Critical Evaluation of current technologies
- F. Oral and Written Group Projects and Presentations

VI. TYPICAL ASSIGNMENTS:

- A. Students will read assigned chapters in texts and current journals and industry magazines related to course content
- B. Students will research current events in communications technology and relate them to historical events (e.g., will the new technologies affect human communication in the same way older technologies affected human communication when THEY were introduced?)
- C. Students will be prepared to discuss topics in groups or give presentations in class

VII. EVALUATION(S):

- A. Methods of Evaluation
 - 1. Objective and subjective examinations and quizzes (for lecture and text assignments).
Typical questions include:
 - a) Draw and correctly label an analog and a digital waveform.
 - b) Create a chart comparing the cost, bandwidth, and quality of wire technologies
 - c) Compare and contrast the features of HDTV, SDTV, and NTSC
 - d) Name and describe three different communications technologies. List two uses in the entertainment industry for each.
 - e) Define simplex, half duplex, and full duplex. Draw a diagram illustrating each.
 - 2. Class discussion and/or written homework assignments
- B. Frequency of Evaluation
 - 1. Each student will be graded on writing assignments at least once every other week.
 - 2. Students will be graded on one or more written examinations and one or more quizzes throughout the semester, at the discretion of the instructor.

For on-line classes, lectures will be delivered via computer with the same course content as classroom lectures; students will participate in on-line discussions that will also parallel traditional classroom discussions. Written assignments will be identical in content. Tests will be given in proctored exam situations, during on-campus scheduled class periods, or on-line as open book essay tests, at the discretion of the instructor.

VIII. TYPICAL TEXT(S):

COMMUNICATION TECHNOLOGY UPDATE, 5th edition August E. Grant, editor Focal Press, 2002.

Multimedia Communications: Applications, Networks, Protocols, and Standards by Fred Halsall Addison-Wesley Publishing; ISBN: 0201398184; 1 edition (September 24, 2000).

Applying Telecommunications and Technology from a Global Business Perspective by Jay J. R. Zajas, Olive D. Church Published by Haworth, Pr ISBN: 0789001152. Publication date: August 1997.

XI. OTHER SUPPLIES REQUIRED OF STUDENTS: None