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CURRICULUM PROPOSAL COVER SHEET
University-Wide Undergraduate Curriculum Committee

I. CONTACT

Contact Person Dr. Charles Kanyarusoke Phone 3773

Department Communications Media

II. PROPOSAL TYPE (Check All Appropriate Lines)

X **COURSE** Emerg Trend in Comm Tech
Suggested 20 character title

____ New Course* _____
Course Number and Full Title

X Course Revision CM 460 Emerging Trends in Communication Technology
Course Number and Full Title

____ Liberal Studies Approval+ for new or existing course _____
Course Number and Full Title

____ Course Deletion _____
Course Number and Full Title

X Number and/or Title Change CM 460 Alternative Systems of Communication
Old Number and/or Full Old Title

CM 460 Emerging Trends in Communication Technology
New Number and/or Full New Title

X Course or Catalog Description Change CM 460 Emerging Trends in Communication Technology
Course Number and Full Title

____ **PROGRAM:** ____ Major ____ Minor ____ Track

____ New Program* _____
Program Name

____ Program Revision* _____
Program Name

____ Program Deletion* _____
Program Name

____ Title Change _____
Old Program Name

_____
New Program Name

III. Approvals (signatures and date)

B Gudlow 12/15/97
Department Curriculum Committee

Kent A Ono 12/15/97
Department Chair

2/18/98
College Curriculum Committee

2/18/98
College Dean

+Director of Liberal Studies (where applicable)

2/18/98
*Provost (where applicable)

Course Revision

Part II. Description of Curriculum Change

1. New Syllabus of Record (attached)

2. Summary of Proposed Revisions

1. Old course title and catalog description
CM 460 Alternative Systems of Communication 3c-0l-3sh
Prerequisites: CM 404, permission
The implications and capabilities of cable systems, the private and industrial utilization of nonbroadcast services, the emergence of satellite CATV networking and the application of two-way cable response systems.

2. New course title and catalog description with new prerequisites
CM 460 Emerging Trends in Communication Technology 3c-0l-3sh
Prerequisites: CM 150
An introduction to the ever-changing world of telecommunication technologies, focusing on modern, computer-driven modes of information exchange. Students will get an opportunity to synthesize several of the technologies covered in the course and integrate them into a workable solution to a practical telecommunication problem.

3. Justification/rationale for the changes

The course title, catalog description and course content are being updated to reflect the changes in current communication technology. A little over 50% of the content of the original course focused on television communication technologies, leaving very little room for inclusion of other, modern telecommunication technologies. The need to update course coverage, in light of current developments in telecommunication technologies, is now a reality. The revised form of the course provides a more inclusive overview of modern telecommunication technologies. It reflects the current, ever-changing world of telecommunication, as revolutionized by digital technology, wireless technologies and the Internet.

The prerequisites are being changed because CM 404, Foundations of Broadcasting is being deleted from the program. This change will not present problems for students in this course, as broadcasting is no longer considered an "emerging" technology and the course content of CM 404 would no longer be relevant for this updated course.

4. Old Syllabus of Record (attached)

Part III. Letters of support (attached to end of documents)

New Syllabus of Record

I. Catalog Description

CM 460 Emerging Trends in Communication Technology — 3 credits, 0 lab hours, 3 lecture hours (3c-0l-3sh)

Prerequisites: CM 101

An introduction to the ever-changing world of telecommunication technologies, focusing on modern, computer-driven modes of information exchange. Students will get an opportunity to synthesize several of the technologies covered in the course and integrate them into a workable solution to a practical telecommunication problem.

II. Course Objectives

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

- correctly identify and name various telecommunication technologies when given their technical descriptions;
- explain how a particular technology works, listing its possibilities and limitations;
- analyze a given telecommunication setup into its individual components or subsystems; justifying the use of each component or subsystem; and
- write a term paper advocating the use of at least three, interrelated technologies to solve a given, specific telecommunication problem.

III. Course Outline

Week 1: (3 hours)
- Orientation
- Class attendance and grading policies
- Model of human communication
- Definition of telecommunication

Week 2: (3 hours)
- History of telecommunication
- Telecommunication in business
- Types of data transmission
- Forms of business telecommunication

Week 3: (3 hours)
- Computer aided telecommunication
- Multi-tasking and multi-processing systems
- Data storage and retrieval systems
- Magnetic storage
- Optical magneto storage
- CD-ROM
- DVD-ROM

Week 4: (3 hours)	Electricity and magnetism Electromagnetic radiation Static electricity AC and DC Analog data transmission Early transmission problems Multi-plexing
Week 5: (3 hours)	Electromagnetic spectrum Wave characteristics Frequency allocation Frequency modulation
Week 6: (3 hours)	The generic telephone Parts of the telephone Ringer equivalency and signaling Dial and address signaling
Week 7: (3 hours)	Wire transmission White and impulse noise Crosstalk Distortion, attenuation and delay
Week 8: (3 hours)	Digital transmission Advantage over analog Mode of digital transmission Synchronous and asynchronous transmission Midterm examination

Week 9	Microwave transmission
(3 hours)	Multi-point distribution services
	Multi-point, multi-channel distribution services (MMDS)
	Optical transmission
	Advantages of optical transmission
Week 10	Satellite communication
(3 hours)	Launching a satellite
	C and Ku band technology
	Direct broadcast satellites
Week 11	Television communication
(3 hours)	History of television
	TV channel allocation
	NTSC standard
	The advent of color television
	High definition television (HDTV)
	Low power television (LPTV)
Week 12	Cable television
(3 hours)	Cable systems
	Two-way cable technology
	Interactive television
	Subscription television
	Wireless cable services
Week 13	Videotext
(3 hours)	Closed captioning
	Teletext
	Teleconferencing
	Video conferencing
	Telecommuting
Week 14	Mobile communication technologies
(3 hours)	Cellular mobile telephone systems
	Paging systems
	Voice mail
	Virtual reality
	Virtual work places

Final examination as scheduled.

IV. Evaluation Methods

Student evaluation will be based on:

Five multiple choice quizzes		20%
Midterm examination		20%
Computer-based telecommunication project		20%
Telecommunication strategy project		20%
Final examination		20%
	total	100%

Grading scale:

90-100%	=A
80-89%	=B
70-79%	=C
60-69%	=D
below 60%	=F

Quizzes
There will be five multiple choice quizzes, spread over the semester. These will test students' mastery of basic technical theory and telecommunication concepts.

Midterm examination
The midterm examination tests mastery of cumulative information learned during the first half of the semester. Most questions will require responses to show comprehension and interpretation of concepts.

Final examination
The final examination will test knowledge, comprehension, and interpretation of facts and concepts learned over the semester.

Computer-based telecommunication project
Each student will be required to identify a counterpart in another part of the world (outside the United States and Canada), with whom he/she will conduct a collaborative telecommunication project. A list of possible projects will be made available by the instructor. Each learner will use the Internet to find his/her counterpart.

Telecommunication strategy project
During the first class meeting, a challenging telecommunication problem will be outlined by the instructor. Each student will be encouraged to keep this problem in mind as various telecommunication technologies are learned over the semester. The student will then synthesize an operational mix of several technologies, and apply them to the design of a workable solution to the problem presented. Individual solutions will be in the form of a technical paper. Reasons for integrating a particular technology will be thoroughly expounded, plus a full technical explanation of how each technology prescribed functions to make the design operational.

V. Required textbooks, supplemental books and readings

Grant, A.E. Ed. (1995). Communication technology update. Focal Press, Boston, MA.

Singleton, L.A. (1995). Global impact: The new telecommunication technologies. Harper & Row, New York.

VI. Special Resource requirements

Each student will need an active VMS account to access the Internet and for exchange of e-mail with classmates, international counterpart and the instructor.

BIBLIOGRAPHY

Abel, J. (1995, February). Understanding the many possibilities of digital. *Radio World*, 9-10.

Akwule, R. (1992). *Global telecommunications: Their technology, administration, and policies*. New York: Free Press.

American Electronics Association. (1988). *High Definition Television (HDTV): Economic analysis of impact*. Santa Clara, Ca: American Electronics Association.

Baldwin, T.T. & McVoy, D.S. (1988). *Cable Communication* (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.

Balio, T., Ed. (1990). *Hollywood in the age of television*. London: Unwin-Hyman, Inc.

Banks, M. & Havice, M. (1991, July-August). Selling time in a new medium: A survey of the low power television industry. *Broadcast Cable Financial Journal*, 24-32.

Biocca, F. & Levy, M. Eds. (1995). *Communication in the age of virtual reality*. Hillsdale, NJ: Lawrence Earlbaum Associates.

Clayton, T. (1994, January).Key factors in the videoconferencing boom. *Telecommunications*, 107.

Chase, S. (1995). DBS in the Unites States. *Via Satellite*, 10 (2), 20-22.

Child, J. (1993, July). Video Compression. *Computer Design*, 8-12.

Coco, D. (1994, April). Squeezing video onto the desktop. *Computer Graphics World*, 45-57.

DAT, DCC, &MD player/recorders: Specifications. (1994, October). *AUDIO, 174*.

Distance learning; Faraway thoughts. (1995, January., *The Economist*, 53.

Dizard, W. (1994). *Old media, new media*. New York: Longman.

Dupagne, M. (1990). High definition television: A policy framework to revive U.S. leadership in consumer electronics. *The Information Society*, (7) 53-76.

Durlach, N. & Mavors, A. (1995). *Virtual reality: Scientific and technological challenges*. Washington, DC: National Academy Press.

Fisher, G. (1992, December). Wireless data comunications; The emergence of new technology. *Computer Reseller News*, 106.

Galbreath, J. (1995, January). Compressed digital videoconferencing: An overview. *Educational Technology*, 31-38.

Glossbrenner, A. (1990). *The complete handbook of personal computer communications*. New York: St. Martin's Press.

Godwin, J.P. (1991, August). Direct broadcast satellite technologies. *Communication Technologies*, 16-19.

Gross, L.S. (1993). *The new television technologies: Satellites*. California State University: WCB Publishers.

Hamit, F. (1993). *Virtual reality and the exploration of cyberspace*. Carmel, In: Sams Publishing.

Hudson, H.E. (1990). Communication satellite, their development, and impact. New York: Macmillan.

Katz, R. (1993, February). What's your choice? *Cablevision*, 24-28.

Kaye, G.M. (1993, February). After video dialtone: more fiber in our diet? *Photonics Spectra*, 58.

Keith, M.C., & Krause, J.M. (1989). *The radio station* (2nd ed.). Boston, Ma: Focal Pres.

Krueger, M. (1991). *Artificial reality*. New York: Addison Wesley.

Kuecken, J.A. (1987*). Fiber optics: A revolution in communications*. Blue Ridge Summit, Pa: TAB Books.

Leanza, U. Ed. (1993). *The future of international telecommunications: The legal regime of telecommunications by geostationary orbit satellite*. Rome: University of Rome.

Lebow, I. (1991). *The digital connection*. San Francisco: W.H. Freeman.

Manne, G. (1994, May). The changing face of cellular phones. *Popular Mechanics*, 54.

Mahlke, G. and Gossing, P. (1987). *Fiber optic cable*. New York: John Wiley.

Meril, J.C., Lee, J., & Freelander, E.J. (1994). Modern mass media (2nd ed.). New York: Harper Collins.

Perey, C. (1994, March). A field guide to software video codecs. *Desktop Video World*, 28-34.

Pilnick, C. (1989). *Cable Television Technology*. Chicester, U.K.: Ellis Horwood Limited.

Purcell, L. (1995). *Super CD-ROM madness!*. Indianapolis, In: Sams Publishing.

Rheingold, H. (1993). *The virtual community: Homesteading on the electronic frontier*. Reading, Ma: Addison Wesley.

Robert R. Nathan Associate. (1988). *High Definition TV's potential economic impact on television manufacturing in the United States*. Washington, D.C: Electronics Industries Association.

Rogers, E. (1986). *Communications Technology: The new media in society*. New York: The Free Press.

Rossman, P. (1992). *The emerging worlwide electronic university*. Westport, Ct: Greenwood Press.

Rushkoff, D. (1994). *Cyberia: Life in the trenches of cyberspace*. London: Flamingo Original.

Salvati, N. (1995, February). Satellites in the multimedia skyway. *Satellite communications*, 24-25.

Singleton, L.A. 1990. *Global impact: The new telecommunication technologies*. New York: Harper & Row.

Stallings, W. (1989). *ISDN: An introduction*. New York: Macmillan.

Tittel, E., & Robbins M. (1994). *E-mail essentials*. Boston, Ma: AP Professional.

Vaughn, T. (1994). *Multimedia, making it work*. Berkely, Ca: Osborne McGraw Hill.

Vizard, F. (1994, January). Building the information superhighway. *Popular Mechanics*, 29-33.

Williamson, M. (1990). *The communication satellite*. Bristol: Adam Hilger.

Worthington, P. (1993, November). Dial M for movie. *PC World*, M33.

Attachment 2
Syllabus
Alternative Communications Systems
CM 460

A2.

I. Purpose of the Course

To acquaint students with the various new technologies being developed in the field of Communications. To make them aware of the impact these technologies have on both the broadcast and non-broadcast industries. The job opportunities in the nonbroadcast fields will also be discussed with the students in terms of career alternatives.

II. Scope of Course

A. Students will better understand our present communication systems.

B. Students will become aware of lesser known communications systems.

C. Students will become aware of present uses of non-broadcast video.

D. Students will gain an understanding of what the future holds in the field of Communications.

E. Students will better understand the advantages and the problems with future communication systems.

III. Text

Not available presently. Articles in journals and text on various related subjects will be required reading.

IV. Bibliography

See attached Bibliography.

V. Procedures to be Employed in the Course

A. Lecture
B. Outside Readings
C. Films
D. Video Tapes
E. Guest Speakers
F. Demonstrations

VI. Evaluation

A. Grades will be based on class participation, examinations, oral reports, and term paper.

VII. Schedule of Course Sessions

See attached Schedule.

CM 460 Alternative Systems of Communication
Text: Television Technology & Alternative Systems of Communications, McCavitt

Time: 3:30-4:30 MWF
Dr. William McCavitt

Date	Session	Chapter	Topic
September 5	1	1	Introduction
7	2	2	Corporate Video
10	3		Corporate Video
12	4		Corporate Video
14	5	3	Medical Video
17	6		Medical Video
19	7	4	Instructional TV
21	8		Instructional TV
24	9		EXAMINATION
26	10	5	Cable TV
28	11		Cable TV
October 1	12		Cable TV
3	13	8	Computer Assisted Instruction
5	14		Micro Computers
8	15		Micro Computers
10	16		EXAMINATION
12	17		Word Processing
15	18	9	Video Text/Teletext
17	19		Video Magazines/ SCA Line 21
19	20		Compressed Speech/Compressed Video
22	21		Digital Sound/Stereo Video
24	22		EXAMINATION
26	23	6	Satellite Communications
29	24	7	Home Entertainment Systems
31	25		Home Entertainment Systems Telelecture/Teleconferencing
November 2	26	10	The Future of Non-Broadcast Video
5	27		The Future of Non-Broadcast Video
7	28		EXAMINATION
9	29		Oral Reports
12	30		Oral Reports
14	31		Oral Reports
16	32		Oral Reports
19	33		Oral Reports
26	34		Oral Reports
28	35		Oral Reports
30	36		Oral Reports

Date	Session	Topic
December 3	37	Oral Reports and Paper Due
5	38	Oral Reports
7	39	Oral Reports
10	40	Oral Reports
12	41	Oral Reports
14	42	Course Review

BIBLIOGRAPHY

Belendiuk, Arthur and Scott H. Robb. Broadcasting via Satellite: Legal and Business Considerations. New York, New York: New York Law School. 1979.

Berryman, Sue E., Tora K. Bikson and Judith S. Bazemore. Cable, Two-Way Video, and Educational Programming: The Case of Daycare. Santa Monica, California: Rand Corporation. 1978.

Black, Gilbert J. Trends in Management Development and Education: An Economic Study. White Plains, New York: Knowledge Industry Publications, Inc. 1979.

Bland, Michael. The Executive's Guide to TV and Radio Appearances. White Plains, New York: Knowledge Industry Publications, Inc. 1979.

Botein, Michael and Ben Park, editors. What to do When Cable Comes to Town: A Handbook for Local Officials. New York, New York: New York Law School. 1980.

Brush, Douglas P. and Judith M. Brush. Private Television Communications: Into the Eighties: The Third Brush Report. Berkely Hights, New Jersey. ITVA.

Bunyan, John A. and James C. Crimmens. Television and Management: The Manager's Guide to Video. White Plains, New York: Knowledge Industry Publicaitons, Inc. 1977.

Chu, Godwin, C. and Wilbur Schramm. Learning From Television: What Research Says. Washington, D. C.: National Association of Educational Broadcasters. 1967.

DeLuca, Stuart M. Television's Transformation: The Next 25 Years. San Francisco, California: A. S. Barnes and Company, Inc. 1980.

Efrein, Joel L. Cablecasting Production Handbook. Blue Ridge Summit, Pewnnsylvania: TAB Books. 1975.

Fedida, Sam and Rex Malik. The Viewdata Revolution. London, England: Associated Business Press. 1979

Haigh, Robert W., George Gerbner and Richard B. Byrne. Communications in the Twenty-First Century. New York, New York: John Wiley and Sons. 1981

Henderson, Madeline M. and Marcia J. MacNaughton. Electronic Communication: Technology and Impacts. Boulder, Colorado: Westview Press. 1980.

Hollowell, Mary Louise. The Cable/Broadband Communications Book, Volume 2, 1980-1981. Washington, D. C.: Communications Press, Inc. 1980.

Kaplan, Don. Video in the Classroom. White Plains, New York: Knowledge Industry Publications, Inc. 1980.

Matrazzo, Donna. The Corporate Scriptwriting Book. Philadelphia, Pennsylvania: Media Concepts Press. 1980

Malrow, Eugene. Managing the Corporate Media Center. White Plains, New York: Knowledge Industry Publications, Inc. 1981

Muhcheryan, Hrand M. Laser Technology. Indianapolis, Indiana: Howard W. Sams and Company, Inc. 1979.

Nilles, Jack M., F. Roy Carlson, Jr., Paul Gray and Gerhard,J. Henneman. The Telecommunications-Transportation Tradeoff: Options for Tomorrow. New York, New York: John Wiley and Sons. 1976.

Osborne, Adam. Runnig Wild: The Next Industrial Revolution. Berkeley, California: Osborne/McGraw Hill. 1979

Park, Rolla Edwards. Audience Diversion Due to Cable Television: A Statistical Analysis of New Data. Santa Monica, California: Rand Corporation. 1979.

Price, Monroe E. and John Wiekiein. Cable Television: A Guide for Citizen Action. Philadelphia, Pennsylvania: Pilgrim Press. 1972.

Rice, David M., Michael Botein and Edward B. Samuels. Development and Regulation of New Communications Technoloigies. New York, New York: New York Law School. 1980.

Sigel, Efrem. Videotext: The Coming Revolution in Home/Office Information Retrieval. White Plains, New York: Knowledge Industry Publications, Inc. 1980.

Smith, Anthony. Goodbye Gutenberg: The Newspaper Revolution of the 1980s. New York, New York: Oxford University Press. 1980.

Smith, Delbert D. Space Stations: International Law and Policy. Boulder, Colorado: Westview Press. 1979.

The Process of Cable Television Franchising. New York, New York: New York Law School. 1980.

Thompson, Tom. Organizational TV News. Philadelphia, Pennsylvania: Media Cocepts Press. 1980.

Wood, Donald N. and Donald G. Wylie. Educational Telecommunications. Belmont, California: Wadsworth Publishing Company. 1977.

Evans, Christopher. The Micro Millennium. New York, New York: Viking Press. 1979.