

APPLICATION FOR NEW COURSE

1. Submitted by the College of Communications and Information Studies Date: October 16, 2008

Department/Division proposing course: School of Journalism and Telecommunications

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number TEL 535

b. Title Telecommunications Network Management

*If title is longer than 24 characters, offer a sensible title of 24 characters or less: Telecomm Network Mgt.

c. Courses must be described by at least one of the categories below. Include number of actual contact hours per week.

() CLINICAL () COLLOQUIUM () DISCUSSION () LABORATORY () LECTURE
() INDEPEND. STUDY PRACTICUM RECITATION RESEARCH () RESIDENCY
(X) SEMINAR () STUDIO () OTHER - Please explain: _____
2.5 hours per week

d. Please choose a grading system: Letter (A, B, C, etc.) Pass/Fail

e. Number of credit hours: 3

f. Is this course repeatable? YES NO If YES, maximum number of credit hours: _____

g. Course description:

See attached

h. Prerequisite(s), if any:

TEL major or minor status, or consent of instructor

i. Will this course also be offered through Distance Learning? YES NO

If YES, please check one of the methods below that reflects how the majority of the course content will be delivered:

Internet/Web-based

Interactive video

Extended campus

3. Supplementary teaching component: N/A or Community-Based Experience Service Learning Both

4. To be cross-listed as: _____ / _____
Prefix and Number printed name Cross-listing Department Chair signature

5. Requested effective date (term/year): Fall / 2009

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): Fall Spring Summer
7. Will the course be offered every year? YES NO
If NO, please explain: _____
8. Why is this course needed?
See attached

9. a. By whom will the course be taught? Regular faculty
- b. Are facilities for teaching the course now available? YES NO
If NO, what plans have been made for providing them?

10. What yearly enrollment may be reasonably anticipated?
15 - 20
11. a. Will this course serve students primarily within the department? Yes No
- b. Will it be of interest to a significant number of students outside the department? YES NO
If YES, please explain.
Will be of interest to students in the DIS and MBA programs in Business and Economics, and to students in the LIS and Destination MA program in Communications and Information Studies

12. Will the course serve as a University Studies Program course[†]? YES NO
If YES, under what Area? _____
[†]AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.
13. Check the category most applicable to this course:
- traditional – offered in corresponding departments at universities elsewhere
- relatively new – now being widely established
- not yet to be found in many (or any) other universities
14. Is this course applicable to the requirements for at least one degree or certificate at UK? Yes No
15. Is this course part of a proposed new program? YES NO
If YES, please name: _____
16. Will adding this course change the degree requirements for ANY program on campus? YES NO
If YES[‡], list below the programs that will require this course:

[‡]In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

17. The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.
18. Check box if course is 400G- or 500-level. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See SR 3.1.4)*
19. Within the department, who should be contacted for further information about the proposed new course?

Name: Dr. Thomas Lindlof Phone: 257-4242 Email: lindlof@uky.edu

20. Signatures to report approvals:

12/1/08
DATE of Approval by Department Faculty

Dr. Beth Barnes
printed name Reported by Department Chair signature

1/12/09
DATE of Approval by College Faculty

Dr. J. David Johnson
printed name Reported by College Dean signature

3/3/09
* DATE of Approval by Undergraduate Council

S. Gill
printed name Reported by Undergraduate Council Chair signature

* DATE of Approval by Graduate Council

/
printed name Reported by Graduate Council Chair signature

* DATE of Approval by Health Care Colleges Council (HCCC)

/
printed name Reported by Health Care Colleges Council Chair signature

* DATE of Approval by Senate Council

/
Reported by Office of the Senate Council

* DATE of Approval by University Senate

/
Reported by Office of the Senate Council

*If applicable, as provided by the *University Senate Rules. (<http://www.uky.edu/USC/New/RulesandRegulationsMain.htm>)*

University of Kentucky
School of Journalism and Telecommunications

TEL 535-001: Advanced Telecommunications Topical Seminar

Telecommunications Network Management

Spring 2008 242 Whitehall Classroom Building

Tuesdays and Thursdays 2:00 PM – 3:15 PM

Professor: John F. Clark
Office: 217 Grehan Building
Office hours: MW 1:00 PM – 2:30 PM
and by appointment
Office phone: (859)257-2810
E-mail: jclark@uky.edu
Course website: <http://www.uky.edu/~jclark/tel535>

COURSE DESCRIPTION

Over the past couple of decades, changes in market forces, technology, and regulation have transformed the public network infrastructure from a traditional monopoly into an increasingly diverse network of networks. These changes complicate considerably aspirations for an advanced infrastructure, while at the same time making it possible. Federal public policies are mired in disputes of competing interests, while state public utility commissions are grappling with issues much more complex than any they have faced before. The growth of competition, the convergence of electronic media, and the breakup and subsequent realignment of the Bell System have combined to upset the traditional arrangement, leaving regulators and policy makers casting about for a new system, in which one can no longer simply equate the telecommunications infrastructure with the telephone industry.

The major focus of this course will be the design and management of telecommunications networks and resources, with the goal of providing cost-effective and efficient internal and external corporate communications. In order to achieve our educational aims, we will attempt to bring together both the technical and the business aspects of telecommunications by highlighting the role of the “hybrid” network designer – in other words, the person who understands and speaks the language of both business and technology, and who can serve as the critical liaison between management and the technical professionals.

This is not a highly technical course. However, we will navigate an overview of a wide range of communications technologies, examining their capabilities and limitations, in order to understand fully appropriate applications of technologies to meet management, end user, and consumer needs. In addition to gaining a thorough understanding of the technological components of telecommunications networks, we will be examining needs assessment procedures, budgetary analyses, and the advantages and disadvantages of various technological configurations. Of course, we will always bear in mind the human and organizational factors to be taken into account in the design and implementation of telecommunications systems. For such systems to be effective, an appropriate “match” between the social system and the technical system must be found.

REQUIRED READING

You're in luck. The book you will have to purchase is a relatively inexpensive book, mainly because it is such a bestseller. However, you won't find it on the campus. Rather than pay too much for it at one of the campus bookstores, you should pick it up cheapest at Amazon.com or one of the other bookseller websites. You will find it invaluable and indispensable, especially after you have graduated and have to act like you know what you're talking about in the working world. Billed as the official dictionary of telecommunications and the Internet, it is:

Newton, H. (March, 2008). *Newton's Telecom Dictionary* (24th ed.). New York: CMP Books.

The current edition is the 24th. However, the 22nd will do. If you're interested, we will be drawing fairly extensively on the following sources, which you are not required to purchase. I will selectively work the relevant material into a PDF document, lecture and/or outline form.

Annual Review of Communications 2005 Volume 36. (2005). Chicago: International Engineering Consortium.

Brenton, C. (2000). *Mastering Cisco Routers*. Alameda, California: Sybex.

Golshani, F. & Groom, F., Editors (2000). *The ATM Handbook*. Chicago: International Engineering Consortium.

Keen, P.G., & Cummins, J.M. (1994). *Networks in Action: Business Choices and Telecommunications Decisions*. Belmont, California: Wadsworth.

Loshin, P. (1999). *TCP Clearly Explained* (3rd Ed.). San Diego: Academic Press.

Messerschmitt, D.G. (1999). *Networked Applications: A Guide to the New Computing Infrastructure*. San Francisco: Morgan Kaufmann.

Web ProForum Tutorials, Volume 11. (2005). Chicago: International Engineering Consortium.

EVALUATION EXPECTATIONS

Your grade for this course will be based on your weighted and averaged scores for a semester project, a mid-term examination, a final examination, five HAT exercises, and your attendance in class.

Project	20%
Midterm Exam	15%
Final Exam	15%
HAT Exercises	25%
Paper Presentation	15%
Attendance	10%

Project: The project will begin with you choosing a business firm or organization to which you have access in some fashion. Your choice will require my approval. You will then prepare a report for the CEO or president concerning the company's telecommunications status quo, including a thorough needs assessment, and recommend an enhanced, upgraded, new-and-improved two-option telecommunications network, along with implementation, evaluation, and training procedures. You will receive more detailed guidelines for the project later in the semester.

Examinations: Both of the exams will consist of a number of short-answer questions, along with one or two essay or diagramming questions. In the interests of higher academic success and happiness, I will magnanimously provide you with my notes throughout the semester and a general indication of the nature of potential essay questions before each exam.

HAT Exercises: There will be five HAT exercises, each consisting of a number of objective items such as multiple choice, true or false, matching questions, plus the possibility of diagramming tasks. Each HAT will be worth five percent of your grade, for a total of 25 percent. There isn't really any traditional "homework" in this class beyond the reading, so the purpose of the HATS is simply to help ensure that you do the required reading for the course so that we may have some coherent discussion. The subject material of each HAT will be the reading due on the date the HAT is given. I will let you know at least a week in advance what these readings are.

Paper Presentation: This assignment requires you to write a 6-8 page explanation and analysis of some specific component of the voice and data networking industry. I'll be giving you a list of possible topics from which to choose, but you can also suggest your own topic, subject to my approval. Additionally, on an assigned date, you will be responsible for presenting the contents of your paper to the class and leading the subsequent discussion. You will also provide a brief (one page), comprehensible outline to be distributed to each student.

Attendance: Attendance for each class is strictly voluntary. It's not my responsibility to make sure you come to class. After all, each of you is old enough to drive, vote, serve in the military, think for yourself, and bear the consequences of your actions. With that said, the consequences of your actions if you miss class will be the loss of five percent of your attendance grade for every absence, unless you notify me of your absence beforehand or have a verifiable excuse after the fact.

Grading Policy:

- A Excellent work, 90 – 100
- B Good work, 80 – 90
- C Barely satisfactory work, 70 – 80
- D Inferior work, 60 – 70
- E Unacceptable work, below 60

Graduate Students: Students who take this course for graduate credit should expect to, in addition to all other course requirements, write a research paper 10-12 pages in length. The paper topic will be mutually agreed upon between the student and instructor. In addition, graduate students may only receive grades of A, B, C, and E.

THE USUAL WARNINGS

Make-up exams, HATs, and late papers will not be allowed without a valid and verifiable reason. The definition of valid and verifiable is left totally to my discretion. It is required that all work submitted for a grade is the original work of the student whose name appears on it, and that the work was prepared expressly for this course. Any use of a cell phone or digital assistant or even the appearance of these

devices during an exam will be construed as cheating. Any student caught cheating or copying from another's exam or HAT or in any way plagiarizing from any source, whether published or not, will be sanctioned according to University rules. .

CLASS SCHEDULE

January 10	Introduction to the course and to each other
January 15	Telecommunications: The Opportunity and the Challenge
January 17	Linking Business and Technology: The Telecommunications Decision Sequence
January 22	Linking Business and Technology: The Telecommunications Decision Sequence
January 24 Routers	Hardymon Building Applied Protocols Experimentation Lab: Switches and Routers
January 29	Introduction to Networked Computing HAT #1
January 30 (Wednesday)	Last day to drop this course without it appearing on your transcript and last day to change your grading option
January 31	Transmission Basics: Terminals and Workstations
February 5	Transmission Basics: Transmission Links
February 7	Transmission Basics: Transmission Methods Student Presentations
February 12	Networked Business Applications HAT #2
February 14	Transmission Basics: Transmission Methods Student Presentations
February 19	Telecommunications Network Fundamentals: Types of Networks
February 21	Telecommunications Network Fundamentals: Types of Networks Student Presentations
February 26	Computers, Networks, and Organizations HAT #3
February 28	Review for the midterm exam/Catch-up

March 3 (Monday)	Midterm of the semester
March 4	Midterm Exam
March 6	Reflection on the Midterm Exam and other soul-searching activities
March 7 (Friday)	Last day to withdraw from this course with a "W"
March 10-15 (Spring Break)	Academic holidays – show up only if you are completely clueless
March 18	Telecommunications Network Fundamentals: Standards and Architecture
March 20	Telecommunications Network Fundamentals: Standards and Architecture Student Presentations
March 25	Networked Software Architecture and Standardization HAT #4
March 27	Telecommunications Network Fundamentals: Standards and Architecture Student Presentations
April 1	Hardymon Building Applied Protocols Experimentation Lab: Network Security
April 3	The Telecommunications Decision Sequence: Managing Network Design Student Presentations
April 8	Trustworthiness: Reliability and Security HAT #5
April 10	Managing the Telecommunications Resource: Security
April 15	Managing the Telecommunications Resource: Network Management
April 17	Field Trip/Guest Speaker
April 22	Field Trip/Guest Speaker Semester Project Due
April 24	Review, Wrap-up, Reflection – or something! Teaching and Course Evaluations
May 2 (Friday)	Final Exam – 8:00 AM in 242 Classroom Building