Southeast Missouri State University

Department: Industrial and Engineering Technology
Title of Course: IP Telephony

Course No.: TN566
Revision: New

I. Catalog Description and Credit Hours of Course:

Theories of Voice over IP (VoIP) and data networking. Topics include TCP/IP network, voice packetizing and compression, VoIP protocols and architecture, Quality of Service (QoS) and security of IP telephony systems. Two hours lecture and two hours lab. (3 Credit Hours)

II. Prerequisite(s):

TN563

III. Purposes or Objectives of the Course:

A. Learn concepts of IP network carries voice packets and develop applications.
B. Understand impact of network delay, jitter, and packet loss on IP telephony applications and learn how to improve voice quality and security over IP networks.
C. Examine the VoIP signaling protocols.
D. Gain proficiency with popular VoIP hardware and software and be able to configure and troubleshoot IP telephony systems.

IV. Expectations of Students:

A. Students are expected to attend all classes. If unable to attend a class, students are required to inform the instructor before the missed class date.
B. Students are responsible for all class notes and reading of the assigned materials. The majority of reading assignments will come from the textbook and handouts.
C. Students are responsible for taking all quizzes and examinations on assigned dates. Late submission without permission from the instructor may be rejected or granted partial credit.
D. Cellular phones and other electronic devices shall not be used during class periods. Phones are to be turned off or silenced during class.
E. Students are to be respectful to other students.

V. Course content or Outline:

| Hrs | A. TCP/IP Review | 8 |
|     | B. Voice Packetizing and Compression | 8 |
|     | C. LAN Telephony | 8 |
|     | D. Real-time Transport Protocol (RTP) | 8 |
|     | E. Mid-term Exam | 8 |
|     | F. Session Initiation Protocol (SIP) & SDP | 8 |
|     | G. Media Gateway Control Protocol (MGCP) | 8 |
|     | H. H.323 | 8 |
|     | I. Quality of Service & Voice Security | 4 |
|     | J. Final Exam |  |
VI. Textbook(s) and/or Other Required Materials or Equipment:

VII. Basis for Student Evaluation:

Undergraduate Students:
A. Homework & Quizzes 20%
B. Mid Term Exam 20%
C. Final Exam 20%
D. Laboratory Projects & Class Participation 40%

Graduate Students:
A. Homework & Quizzes 20%
B. Mid Term Exam 20%
C. Final Exam 20%
D. Laboratory Projects & Class Participation 30%
E. Graduate Research Project & Presentation 10%

VIII. Grading Scale:

Undergraduate: Graduate:
A =100 – 90% A = 100 – 90%
B = 89 – 80% B = 89 – 80%
C = 79 – 70% C = 79 – 70%
D = 69 – 60% F = Below 70%
F = Below 60%

The weight of the evaluation criteria may vary according to each instructor and will be communicated at the beginning of the course.

IX. Academic Policy Statement:
Students will be expected to abide by the University Policy for Academic Honesty regarding plagiarism and academic honesty. Refer to:
http://www6.semo.edu/judaffairs/code.html

X. Student with Disabilities Statement:
If a student has a special need addressed by the Americans with Disabilities Act (ADA) and requires materials in an alternative format, please notify the instructor at the beginning of the course. Reasonable efforts will be made to accommodate special needs.