I. Catalog Description and Credit Hours of Course:

Switching and operation of networking technologies and protocols. Topics include operation and security configurations of VLAN, trunking, VTP (VLAN Trunking Protocol), inter-VLAN routing and layer two networks. Two hours lecture and two hours lab (3-credit hours)

II. Prerequisite(s): TN275 or TN562

III. Purposes or Objectives of the Course:

A. Understand and demonstrate how switches are interconnected and configured to provide network access.
B. Familiarize with layer-2 switching protocols and concepts used to improve redundancy, propagate VLAN information and securing the network.
C. Utilize network tools and gain experience with their applications.
D. Design, implement, and test network solutions.
E. Setup, configure and troubleshoot computer hardware, software and peripherals.
F. Develop ability to work in teams, apply self and project management skills, and presentation skills.

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:

| A. Switched network architecture | 12 |
| B. Basic switch concepts and configuration | 8 |
| C. VLAN | 12 |
| D. Mid-term Exam | |
| E. VTP | 8 |
| F. STP | 8 |
| G. Inter-VLAN routing | 8 |
| H. Review | 4 |
| I. Final Exam | |
VI. Textbook(s) and/or Other Required Materials or Equipment:
Published 2008

VII. Basis for Student Evaluation:
Grading will consist of the following criteria and percentages:

Undergraduate Students:
A. Research Project and Homework                        40%
B. Mid Term Exam                                         15%
C. Final Exam                                             15%
D. Laboratory Projects                                    30%

Graduate Students:
A. Research Project and Homework                        30%
B. Mid Term Exam                                         15%
C. Final Exam                                             15%
D. Laboratory Projects                                    20%
E. Graduate Research Project & Presentation              20%

VIII. Grading Scale:

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<th>Undergraduate</th>
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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.