I. Course Title: Advanced Internet

II. Course Prefix/Number: CSCI 320

III. Credit Hours: 3.0

IV. Prerequisite(s):
CSCI 245 minimum grade C AND ( CSCI 210 OR CSCI 208 – minimum grade C-)

V. Catalog Description:
Advanced topics and hands-on experience with hardware and software systems used for providing internet services in industry, education and government. The course will survey systems and service options, examine how to establish and maintain services, and explore implications of new technology for future internet and intranet systems.

VI. Curricular Relationships:
Advanced Internet is a required course for the Communications Technology Minor. It also serves students who wish to develop and maintain Internet services in a variety of disciplines.

VII. Student Learning Outcomes:
- Students will demonstrate the skills and background necessary to establish an Internet/intranet service through an existing network.
- Students will be able to list and describe the security threats to Internet servers and basics techniques to enhance and maintain the security of a server.
- Students will be able to perform simple troubleshooting of servers and clients.
- Students will be able to compare and contrast options for platforms, operating systems, software and services used on intranets and the Internet.

VIII. Content Outline:
1. Types of services such as Telnet, FTP, World Wide Web, and Data base Queries
2. Systems models
3. Security threats and Techniques
4. Planning for appropriate Internet/intranet services
5. Selecting software appropriate to the needs of an institution
8. Trouble shooting skills.
9. Real time and multi-media servers.
10. Future options and speculation.
**IX. Course Procedures/Policies/Grading Scale:**
The course will be a combination of practical hands-on experience and traditional study of issues and information pertaining to the Internet and intranets.

1. For hands-on assignments students work in small groups or independently.
2. Students work independently on assignments involving traditional study.
3. A midterm consisting of either a practical exercise, in-class exam, or both will be given.
4. A short paper/report discussing an issue(s) pertaining to inter-networking will be due for the final. The topic for the paper must be approved by the instructor before the midterm.
5. Student groups will setup and maintain an Internet server. The quality and success of the server will be counted as 10% to 30% of the course grade

**X. Required/Recommended Readings:**
1. Readings from hardware and software manuals.
2. Readings from various journals.
3. Class notes.
4. A textbook or textbooks such as Laurie & Laurie. *Apache the definitive guide*, O’Reilly 1999
   And Tsuji & Watanabe. *Setting up a Linux Internet Server*, Coriolis 2000

**XI. Issues Unique to Course:**
This course requires additional computer laboratory time.

**XII. Additional Departmental Issues:** None.