

CET 4748 – Introduction to Wide Area Networks

- Fall 2010 -

Course Description

This course is an introduction to technologies and protocols used in Wide Area Networks. The course teaches the basics of the TCP/IP protocols at the foundation of the internet and covers wired and wireless communication architectures, such as Ethernet, IEEE 802.11, SONET. Students will get an understanding on how LANs and WANs are implemented in practical circumstances. Assignments using the OPNET IT Guru network simulator provide hands-on experience for network design, configuration, and performance analysis.

Instructor

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Boca Campus, SE 480, tel. (561) 297-3401

Textbook

Bruce Sinclair, Michael Palmer, A Guide to Designing and Implementing Local And Wide Area Networks, 2nd Edition, 2003, Cengage Learning

ISBN-10: 061912122X ISBN-13: 9780619121228

Book URL: [link](#)

Supplementary reading material will be handed in class.

Class Time & Place

Tuesdays, 07:10PM-10:00PM

Boca Raton: **FL404** (room changed from FL101)

PSL: JU112

Office Hours

Time T R 2:20-5:20PM

Boca Raton SE480, tel: 561-297-3401

Course Objectives

At the completion of this class, students will:

1. understand recent WAN and wireless technologies
2. understand how the TCP/IP protocols operate
3. comprehend mechanisms for internetworking
4. know how to apply elements of network design
5. know how to use the OPNET IT Guru simulation tool for network study and design

Course Topics

1. LAN/WAN interconnectivity
2. Physical transmission options
3. Network transmission equipment
4. LAN protocols
5. TCP/IP protocols
6. WAN transport methods
7. Wireless technologies
8. Integrating voice, video, and data
9. LAN/WAN design
10. OPNET IT Guru modeler

Blackboard:

All course material will be posted on Blackboard

<http://blackboard.fau.edu>

Grading Policy

One quiz at the beginning of almost each class. One homework per week.

- Homeworks: 60%
- Midterm and final exams 40%

The final grade will depend on how well the student performs relative to the rest of the class.

Assignment Submission

Homeworks are due on the date specified on Blackboard and must be submitted on Blackboard's Digital Dropbox. No assignments will be accepted after the due date.

Policy for Plagiarism

Students are required to work individually on all assignments and are expected to submit their original work. Please go to your instructor if you have any questions related to the course. Any occurrences of plagiarism will be handled according to F.A.U. policies.