

Network Design and Administration for Workforce Education EBUS 5080/7080

The University of Georgia
Workforce Education
Spring 2008 Jan7. – May 6.
Class Meeting: W 5:00 – 7:45 P.M.
Room: 143 River's Crossing

Course Number: EBUS 5080
Professor: Dr. John Mativo
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Course Syllabus

- I. **Course Purpose:** To explore fundamental principles and methods in network design, development, and administration.

- II. **Catalog Description:** *EBUS 5080/7080 Network Design and Administration for Workforce Education 3 hours.*
Network design and administration for business education environments. Software and hardware components, network security, and strategies for enhancing and troubleshooting networked systems. Curriculum designs and instructional strategies for networking courses in school and workplace settings.

- III. **Prerequisites:** Permission of department.

IV. General Course Objectives

Upon successful completion of this course, the student will:

- a. Gain fundamental knowledge about networking hardware and software applicable within the business education environments
- b. Acquire necessary skills for identifying basic maintenance and troubleshooting activities required for network installation and operations
- c. Learn appropriate terms for communicating about network installation and operation
- d. Be able to identify strategies for protecting computer networks from threats to security and malicious code
- e. Develop instructional skills and become familiar with available curriculum materials for business education course instruction

Additional Requirements for Graduate Students: Graduate students will:

- a. Identify and describe an array of instructional models for teaching networking design and administration
- b. Describe strategies for introducing network design and administration within a business education curriculum

- c. Demonstrate appropriate research strategies for maintaining network design and administration competencies. Additional graduate student topics will include:
 - a. Assessment and administration of alternative instructional models for network design and administration instruction
 - b. Research strategies for maintaining competencies
 - c. Initiating new network design and administration instruction

V. Course Content

Course Outline

| Week | Date | Topic/Activity | Reading |
|------|--------|--|--|
| 1 | Jan 9 | Introductions/ Issue syllabus/Overview of courses [John/Joe] | |
| 2 | Jan16 | Understanding hardware and hand-on networking [Barry] | Chp. 1 <i>1-32</i> Chp. 10 <i>355-390</i> |
| 3 | Jan 23 | LAN and WAN Communications | Chp. 2 <i>33-73</i> |
| 4 | Jan 30 | Network Communication Protocols | Chp 3 <i>75-120</i> |
| 5 | Feb 6 | Cabled Network Connections | Chp. 4 <i>123-157</i> |
| 6 | Feb 13 | Devices for Connecting Networks/Midterm Review [Barry/John] | Chp. 5 <i>159-198</i> |
| 7 | Feb 20 | Midterm | |
| 8 | Feb 27 | Wireless Network Connections | Chp. 6 <i>201-241</i> |
| 9 | Mar 5 | Sharing Resources on a Network | Chp. 7 <i>241-273</i> |
| 10 | Mar 12 | Spring Break | |
| 11 | Mar 19 | Using a Server | Chp. 8 <i>275-312</i> |
| 12 | Mar 26 | WAN connection choices | Chp. 9 <i>313-352</i> |
| 13 | Apr. 2 | Network Security | Chp. 11 <i>391-427</i> |
| 14 | Apr 9 | Maintaining and Troubleshooting Network [Barry] | Chp 12 <i>429-467</i> |
| 15 | Apr 16 | Projects | |
| 16 | Apr 23 | Projects/ Final Exam Review | |
| 17 | Apr 30 | Final Exam | |

VI. Course Details

Please See course outline and Laboratory Manual plus:

Laboratory Activities

Laboratory exercises will be assigned on the various topics covered throughout the course. These exercises will usually be based from the *Hands-On Networking Fundamentals*.

Portfolio

Each student will present their completed problems and laboratory assignments at the end of the term in an electronic portfolio. The portfolio should contain a summary of each chapter that we cover during the course as well as the various laboratory assignments that coincide with the chapter. The portfolio will be evaluated on how well it represented material covered, organization, documentation, and attractively layout.

Examinations

There will be two (2) examinations during the term, a Mid-Term (covering material from the first class meeting to the date of the exam) and a Final (a comprehensive exam related to any/all material covered during the term).

Class Participation

Punctuality and attendance are important to successful completion of requirements for this course. For that reason, attendance will be taken at each class meeting. The class participation portion of the course evaluation will be based on punctual attendance to all class meetings, participation in class discussions, and appropriate care of equipment.

Graduate Students

Depending on class composition of graduate/undergraduate numbers, each graduate student will be assigned a team of an undergraduate to lead. It is expected that coordination and project work will be evenly distributed among team members.

VII. Course Evaluation Methods

Evaluation will be based on written and practical exam, laboratory work and assigned projects. Grades will be distributed as follows:

| | |
|---|-----|
| Assigned problems | 25% |
| Exercises, Laboratory Activities & Attendance | 20% |
| Mid-Term examination | 25% |
| Final Examination | 25% |
| Electronic Portfolio | 5% |
| Graduate Student | 15% |

Grades:

Letter grades will be earned as follows:

| | | | |
|-----------|----------|----------|---------|
| A | 94 – 100 | C+ | 77 - 79 |
| A - | 90 – 93 | C | 74 – 76 |
| B+ | 87 – 89 | C- | 70 - 73 |
| B | 84 – 86 | D | 60 - 69 |
| B- | 80 – 83 | F | 0 – 59 |

Laboratory Sessions:

Laboratory reports are due a week after each experiment/activity. Each student/student group is responsible for accomplishing these experiments/activities during open lab times. Make sure you keep up with your laboratory work.

Attendance/Participation:

Attendance is crucial especially considering the density of facts, concepts, principles, and procedures covered in each class. Missing even one class could set you seriously behind. Realize that if you are absent, even for valid reasons, you are responsible for the material and assignments discussed in each and every class. In addition, I expect each participant to take an active role by contributing and sharing thoughts and ideas, taking initiative, and seeking to help other members of the class. Each participant is expected to remain open to new ideas and different points of view.

Attendance records will be recorded at the beginning and at the conclusion of each class meeting. *Your grade in this class will be dropped 3% points for two (2) unexcused absence and you will be removed from the class role after three (3) unexcused absences. In addition, tardiness will result in a 3% point reduction in grade if more than three (3) unexcused tardy attendances occur.*

Late Assignments:

I expect assignments to be completed on time. My standard policy regarding assignments is 10% penalty for late assignments turned in within 1 week of the due date and 50% penalty for assignments turned in thereafter until the end of the course (defined as the last regular class session). I use this system even in the event of "excusables," such as minor sicknesses or other unforeseen conflicts. However, any exceptions to this policy are made at my discretion.

Honesty:

Cheating on class assignments, examinations, or other serious forms of academic activities will result in a grade of an "F" (and a required report to University officials). Persons "borrowing" someone else's work on an assignment will receive a zero on that assignment if it is the first offense. A second offense will be considered a serious form of academic dishonesty. (Borrowee is equally subject to penalties.) Refer to UGA's *A Culture of Honesty: Policies and procedures on academic honesty.*

Withdrawal/Drop Policy:

Drop policy is as described in the university's undergraduate bulletin, page 45.

VIII. Course Materials

Required Instructional Materials:

Text:

Palmer, Michael. (2006). *Networking: Hand-On Networking Fundamentals*. Thomson Course Technology ISBN: 1-4188-3554-4

Reference Textbooks:

Dean, Tamara (2004). *Networks+ Guide to Networks 3rd Edition*. Thomson Course Technology ISBN: 0-619-21313-2

Equipment and Materials:

1. Safety awareness

IX. Ways to Contact Professor

Please refer to office hours and e-mail or phone instructor to make other arrangements.