

**Network Information & Technology Administration 210:
Concepts of Networking and Business technology
Instructor: James Banfield —Winter 2007**

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Office Hours: T, Th 9am-2pm (Other times by appointment) *Students should make appointments to see the instructor at least 24 hours in advance. Appointments take precedence over walk-in visits and are recommended.

EMU-Online: EMUONLINE.EDU will be used extensively in this course. Class announcements, lecture slides and assignments will be distributed via the web site. To enroll in EMUonline go to <http://emuhelpdesk.com>, and then click on "get access" and request access for the course. You are expected to be enrolled online by January 15th.

Course Description: The concepts and functions of operating systems, networks and related business technology. The course emphasizes administration of personal computers, their applications and peripherals, and peer-to-peer networks. The course includes equipment, procedures, and career opportunities. Prerequisite: BEDU 201 Microcomputers for Business Applications or equivalent.

Prerequisite: BEDU 201 is a prerequisite. The BEDU 210 course assumes the system hardware, operating system, and software applications experience established in the BEDU 201 course.

Course Objectives: Upon successful completion of this course, students will be able to:

1. Demonstrate knowledge of current operating system, network and business technology theory and concepts.
2. Distinguish between and construct workgroup/peer-to-peer and basic client/server networks.
3. Demonstrate ability to configure peers and clients in networks.
4. Demonstrate ability to administer and secure a small network.
5. Design a network that
 - has clearly stated requirements based on an end-user group or organization-wide need
 - addresses a need addressed by a workgroup/peer-to-peer or client-based LAN
 - demonstrates understanding of naming conventions, directory structures, users and groups, file and object permissions/security, security, and administration requirements.
 - justifies the selection of topology, protocols, and architecture.
 - documents how the network design meets the OSI standards of a well-administered network.
 - documents the design in a professional manner in written and oral form.

In addition, students should be able to readily complete any further preparation for appropriate certification examinations, should they desire to do so. Demonstrating these objectives meets the prerequisites for enrolling in BEDU 344 Administration of Computer Systems.

Texts and Other Study Materials:

Students should have a disk or mass storage device for files that may be required for the course. Changing versions of software, and their enhanced features, requires that texts be evaluated and changed frequently. Examples of texts, subject to upgrades, are:

Michael Palmer – Hands-on Networking Fundamentals
ISBN: 1-4188-3554-4 © 2006
[ISBN-13](#): 978-1-4188-3554-5 Publish date: August 18, 2005

Optional Text:

Dean, T. (2006). *Network+ Guide to Networks*. Thomson Course Technology. ISBN: 0-619-21743-X.

Palmer, M. & Walters, M. (2003). *Guide to operating systems (3d ed.)*. Course Technology/Thomson Learning. ISBN: 0-619-21347-7.

Reimer, S., Keding, M. (2002). *Microsoft Windows XP Pro Lab Manual*. Thomson Course Technology. ISBN: 0-619-12033-9.

Other Windows Server and XP reference materials.

Students are expected to complete additional research using electronic and conventional media for additional information or clarification of concepts and procedures.

Requirements: Course requirements and grading are as follows:

- Tests (Three exams) 40%
- Laboratory assignments and attendance 40%
- Course project 20%

Points in each area are cumulated and converted to percent form. The final letter grade is assigned as follows: A 94-100%; A- 90-93%; B+ 87-89%; B 84-86%; B- 80-83%; C+ 77-79%; C 74-76%; C- 70-73%; D+ 67-69%; D 64-66%; D- 60-63%; E 59 and below.

Withdrawals and incomplete grades will be issued pursuant to University policy. Incompletes are not generally given except in cases where the majority of the coursework is completed with a passing grade and the circumstances are serious, verifiable, and not within the student's control (illness, family emergency, etc.).

Assessment: Assessment of mastery of the course objectives is based on the following assessment methods:

- Objectives 1 and 2: tests and course project
- Objectives 2 through 4: course assignments, project assignments, participation, and course project
- Objective 5: Documentation, format and presentation of course project. See detail section for course project.
- Tests 40%
Students should expect concepts tests to consist primarily of true/false, multiple choice, matching, or fill-in items. Tests will also include short answer problems that require analysis.
- Laboratory Assignments and Course Participation 40%
Operating system/networking laboratory assignments will be part of the interactive learning experience. Some laboratory assignments, when started during a class session, will also constitute participation. The format of class sessions includes lecture, interactive demonstration and participation, and group problem solving components. Documentation of participation is required as directed in class. Each session is broken into three general topic areas: review and Q&A of previous class session; networking concepts and theory; and preview of laboratory activities. These are followed by supervised lab time.
- Course project 20%

1 of 2 options (instructor will guide students to one of the two options):

Project option 1:

Each student will plan, design, and document a comprehensive network and systems consulting proposal based on an instructor supplied, client requirements sheet. Students will present their designs to the class during the last week of class. Students will work in teams to meet project goals.

Students must:

- Plan and design a server-based network that meets requirements of a well-administered network per OSI standards.
- Create comprehensive and professionally formatted topological drawings.
- Create listings of all hardware and software required to complete a design, including item pricing, vendor information etc.
- Write a detailed description of the design detailing how the environment addresses scalability, cost effectiveness, redundancy, availability, and performance.
- Craft and deliver a professional presentation to the class, detailing the strengths of the chosen design, creativity in meeting the objectives, and evidencing thorough preparation.

Project option 2:

Each student will present a lecture (tutorial) on a topic assigned from the instructor. The lecture will be delivered to the class as an exercise in teaching technical topics

Students must:

- Lecture for 20-30 minutes
- Craft and deliver a professional presentation to the class, detailing the strengths of the chosen design, creativity in meeting the objectives, and evidencing thorough preparation.
- Create comprehensive and professionally formatted topological drawings, as dictated by project topic.
- Provide lesson plan and reference material for assigned topic

Supplies: Students should always be able to access two copies of files during every class session. That is, in the event that the working file becomes damaged, students must be able to access the backup file. Students must back up files so that there are copies of class files on two separate, accessible media. This may include zip disks, flash memory/jump or thumb drives, remote or networked storage, or other media of the student's choice. Floppy disks are rarely adequate for more than small files, containing few or no multimedia content.

Continuity/Disaster Recovery Planning: THE STUDENT IS RESPONSIBLE TO BACK UP COURSE WORK AND CHECK FOR MALICIOUS CODE/VIRUSES REGULARLY. If files are not backed up, the student is responsible to re-create the file.

Course Policies:

Communicate with Your Instructor: Good communication between the student and the instructor prevents problems in many areas. Many of the following policies address problems that develop when the instructor and the student have not communicated. Communication is a responsibility of both students and instructor.

Research and Reference: Be ready to use your textbooks for reference as well as reading. If a term or concept is not clear, research it. Use conventional print as well as Internet and Web

resources specific to the course content. Owning and growing your knowledge gives you expertise.

Preparation for Class: Keep to the assigned schedule. If a tutorial or assignment is due on a particular day, it is due at the beginning of class. Even if problems occur (they always do), your instructor expects you to **submit what you can** on the due date. Then undertake problem solving, seek assistance as needed, and resubmit the completed work. Problems and questions will be reviewed at the start of each class period where possible, or addressed during an appropriate part of the class session.

Tests: There are no make-up tests except for verified emergencies (injury or health-related crisis to the student or to an individual under the student's direct care). Telephone, voicemail, or email communication must occur at the time of the emergency by the student or family member. Verification (hospital, doctor, police report) must be presented immediately upon return to class and the test must be taken by before the next class session.

Requests to re-schedule a test for serious need (parent-teacher meeting, legal requirements, significant family event, or other) must be made to the instructor in memorandum format with justification by the beginning of the second week of class to the instructor and test taken prior to departure). The instructor assumes that a serious need is known by the student on the first class day and that no other commitments will be scheduled by the student after the course schedule has been distributed.

Late Work: Extenuating circumstances concerning late assignments will be treated on an individual basis. There are situations in which students will be permitted to turn in assignments after the due date without penalty, but equity is a primary consideration in exercising this policy. **In order to provide fair treatment, students must request an extension (not to exceed one week) and provide a progress report by the due date.** In the case of a verified emergency (injury, illness, or family emergency), the instructor reserves the right to work with the student without a progress report, but notification to the instructor must be made in a timely fashion.

- Unless a progress report or notification has been made in a timely fashion, papers receive a late penalty (1/3 value for one class session, 2/3 value for two class sessions, and no value after two sessions from the original due date.
- Avoid late penalties by submitting progress reports and requesting extensions for work.

Participation: University Policy states: “. . . regular class attendance and active participation in classes are important elements in the learning process. Students are at the University primarily for the sake of their intellectual growth and development. Attendance and participation provide appropriate opportunities for the evaluation of the student's progress. . . .

“Each student is personally responsible for the satisfactory completion of the course work prescribed by her/his instructors even though much of the work in this class is to be accomplished by a team. This means specifically that she/he is expected to attend class regularly, and that she/he is responsible for the work assigned in class, the material covered in class and for participation in class activities (including discussion and listening) designed by the instructor as part of the learning experience.”

Academic Honesty: Why would a student submit someone else's work? The student gains no knowledge; the student masters nothing. However, some students take the work of others, while others give their work to students to claim as their own.

There are two parties to academic dishonesty.

- Any work submitted as the student's own work must be his/her own work. To submit the work of others is intellectually dishonest and carries penalties. The instructor reserves the right to apply University policies to work submitted by a student but prepared by others.
- Any work provided to others to submit is also dishonest. Any student inclined to share work on the basis of "helping another" may be helping another to get a degree. They may also be contributing to incompetent work in the workforce.
- Your integrity matters.

Other:

- Please ask about having guests attend class. Both the instructor and other students are affected by individuals who are not members of the class.
- If you wish to use the lab when other classes are in session, ask permission of the instructor.
- Cell phones should be in silent mode if a student is required by employment to be available or if a serious situation has developed or is impending. Students are asked to leave the class quietly for these types of calls and to return quietly upon their completion.