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BMIS 471.01: Fundamentals of Network & Security Management

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BMIS 471 *Fundamentals of Network & Security Management*
Fall 2021

Instructor: Dr. Shawn F. Clouse, GBB 328, 243-5985 (office), or 728-5219 (home), shawn.clouse@umontana.edu

Scheduled Time: Tuesday 12:30pm – 3:20pm

Meeting Place: GBB 213

Outside Lab Hours: 1 to 2 hours per week depending on the modules

Office Hours: Monday & Wednesday 9:30am – 10:30am, Tuesday from 11am – noon, or by appointment

Course Description

This current topics course will focus on the design, installation, configuration, security, and operation of local area networks. This course provides students with the knowledge and skills necessary to install and configure servers that are part of a Microsoft Windows workgroup or domain. The topics covered in this course are the fundamentals for cyber security how it impacts organizations. We will discuss other local area network methodologies including Novell NetWare, Linux, and UNIX, but hands-on experience will be with Microsoft networking technologies. This course will utilize the virtual networking lab provided with the textbook. Every class will include a lecture or discussion on network topics along with a hands-on lab demonstrating the concepts.

Credits:

This three-credit course can be used to meet the MIS elective degree requirements.

Prerequisites

This course requires students to have a basic knowledge of computers and networks that can come from courses offered in the Computer Science Department, Management Information Systems Department, Missoula College, or through work experience. Business & MIS students should have completed the lower core.

Textbook

Required

- *uCertify Windows Server 2016 Administration Fundamentals Microsoft 98-365.AA1.*

Optional

- *Mastering Windows Server 2016* by Jordan Krause, Wiley, ISBN 978-1-78588-890-8 Free PDF on Moodle

Course Objectives

- To expose students to introductory networking and security concepts in the information technology industry. (Knowledge and Comprehension)
- To expose students to computer hardware concepts (hard drives, RAM, CD-ROM, RAID, security, etc.). (Knowledge Comprehension, and Application)
- To expose students to the impact of network technology and security on a business operation. (Application and Analysis)
- To give students hands-on experience installing, configuring and operating computer hardware and software in a network environment. (Analysis and Synthesis)
- To enable students to develop network/security plans and implement and manage those plans in a laboratory setting. (Analysis and Synthesis)
- To allow students to implement information systems/security theories and practices in a lab environment that simulates real business scenarios. (Synthesis and Evaluation)

Course Topics

- Introduction to Server Hardware
- Introduction to Network Concepts including the OSI Model and TCP/IP
- Introduction to Workstation Operating Systems
- Discuss alternative network options such as peer to peer and server-based networks
- Design and configure a domain environment
- Connect clients to a network
- Introduce the concepts involved with accessing and administrating data
- Utilizing virtualization technology for hands-on cloud-based labs
- Introduction to network security concepts and the business issues to operate and secure mission critical resources
- Design and implement disaster protection plans

Grading

- Student performance will be based on a combination of quizzes (drop the lowest score), assignments, attendance/class participation/labs, and a final exam. These four areas will be weighted equally with regards to the final grade. The final exam will be open book and require students to demonstrate many of the skills learned throughout the semester.

Activity	Points	% of Course Grade
Quizzes (eight 10-point quizzes & two 20-point quizzes) (drop the two lowest 10-point quiz)	100	25%
Assignments	100	25%
Labs/Attendance	100	25%
Final	100	25%
Total	400	100%

- Students wishing to take this class for graduate credit will be required to prepare a research paper on an advanced networking topic. The research paper should address the organizational issues for implementing and operating a network to meet the information technology needs of a business or organization. Students should research the issues associated with directory services, network infrastructure, and network security for the selected topic. The paper should be written in APA format and show that the student has synthesized the research material into a document that makes recommendations for successful implementation of a network system for a business or organization. Students are required to get the research topic approved by the instructor.
- Grades will be assigned based on the following breakdown: A – 90% and above, B – 89% to 80%, C – 79% to 70%, D – 69% to 60%, and F – below 59%.

Email, Moodle, & Attendance

- The university policy regarding student e-mail requires faculty members to only correspond with students regarding academic issues if both parties use official UM e-mail addresses. This means that faculty need to use a @umontana.edu address sent to the student's @umconnect.umt.edu address.
- I try to be timely in my email responses. If you email me during the week you will almost always receive a response that day. Treat all emails as a form of professional communication in the class. Your messages should be well written and grammatically correct. Furthermore, your messages should begin with a proper salutation and closing. **If your email does not meet these standards of professional communication, you will get a response asking you to rewrite it.** Your professional communication skills will be critical to your success in business and this is an excellent opportunity to practice them in the class.
- It is your responsibility to check your email account and Moodle regularly. All email correspondence will be sent to your @umconnect.umt.edu accounts. You are responsible for all material provided to you through these venues so you should check them both regularly. It is a good idea to keep your **Sent Items** for all email communications.
- Class attendance is extremely important to succeed in this course. Attendance is mandatory and it will be taken at the beginning of class. My goal is to know everyone's name by the end of the semester and taking attendance will help me do that. I understand that there will be times when personal issues are unavoidable and take priority. *****Each student will be allowed one (1) excused absence (regardless of reason)***.** If you miss, more than one time you will receive a negative adjustment your final grade. The professor reserves the right to adjust the student's final grade up to one full letter grade for each absence. It is a good idea to let the professor know when you plan to be gone, just like you would let your boss know when you plan to be absent from work. If you are absent, it is your responsibility to obtain any course materials from your peers.

COVID-19:

- Mask use is required within the classroom or laboratory.
- If you feel sick and/or are exhibiting COVID-19 symptoms, please don't come to class and contact the Curry Health Center at (406) 243-4330.
- If you are required to isolate or quarantine, you will receive support in the class to ensure continued academic progress. (Add specific information about how you, as the instructor, will continue providing course materials to students in quarantine or isolation.)

Academic Misconduct

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at <http://www.umt.edu/studentaffairs>.

Reasonable Accommodations

Students with disabilities may request reasonable modifications by contacting me. The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and [Disability Services for Students \(DSS\)](#). "Reasonable" means the University permits no fundamental alterations of academic standards or retroactive modifications. (For other options see <http://www.umt.edu/disability>).

School of Business Administration Grievance Policy

Although conflicts between students and professors are rare, they do occasionally occur. Please be aware that the standard operating procedure for dealing with such conflicts within the School of Business Administration is as follows:

1. Try to resolve the conflict directly with the professor.
2. If you feel that the conflict cannot be resolved between yourself and the professor, contact the chair of the Management Information Systems department.
3. If, after speaking with the department chair and the professor, you still feel that the conflict has not been resolved, contact the Associate Dean of the School of Business Administration.

School of Business Administration Mission Statement and Assurance of Learning

The College of Business at the University of Montana creates transformative, integrated, and student-centric learning experiences, propelling our students to make immediate and sustained impact on business and society. We nurture our students' innate work ethic to develop confident problem solvers and ethical decision makers. We pursue thought leadership and collectively create opportunities for a better life for our students, faculty, and staff.

COB Core Values:

- Students first: We educate the whole person
- Experiential learning: We create experiences that matter

- Thought leadership: WE create rigorous and relevant knowledge
- Stewardship: We value people, planet and profit

Learning Goals: As part of our assessment process and assurance-of-learning standards, the COB has adopted the following learning goals for our undergraduate students:

- Learning Goal 1: COB graduates will possess integrated business knowledge for the core disciplines of Accounting, Finance, Management Information Systems, Management and Marketing.
- Learning Goal 2: COB graduates will be effective communicators.
- Learning Goal 3: COB graduates will possess problem-solving skills.
- Learning Goal 4: COB graduates will have an ethical awareness.