

CIS 164: Networking Fundamentals I ONLINE

COURSE SYLLABUS

COURSE INFORMATION

CIS 164: Fundamentals of Networking I, 3 credits, PS #9230

Course Description: This course teaches students the skills needed to obtain entry-level home network installer jobs. It also helps students develop some of the skills needed to become network technicians, computer technicians, cable installers, and help desk technicians. It provides a hands-on introduction to networking and the Internet using tools and hardware commonly found in home and small business environments. Instructors are encouraged to facilitate field trips and outside-the-classroom learning experiences. Labs include PC installation, Internet connectivity, wireless connectivity, file and print sharing, and the installation of game consoles, scanners, and cameras.

INSTRUCTOR

Dr. Mohammed Mahmoud (e-mail: mohammed.mahmoud@willistonstate.edu)

Office Hours: By appointment through zoom.

TEXTBOOK & MATERIALS

- Computer Networking: A Top-Down Approach, 8th Edition, James Kurose and Keith Ross (Publisher: Pearson).
- Wireshark Labs.

STUDENT LEARNING OUTCOMES

INSTITUTIONAL OUTCOMES

1. Students will demonstrate effective communication skills.
2. Students will use reasoning skills to analyze and solve problems.

PROGRAM OUTCOMES

1. Demonstrate computer network installation, maintenance and repair skills
2. Design, install and troubleshoot a Local Area Network (LAN)
3. Describe the fundamentals of Wide Area Networking (WAN)

4. Apply knowledge and interact with Windows server technologies to manage users, active directory, network infrastructure configuration and server applications
5. Demonstrate a knowledge of computer network security concepts and techniques
6. Demonstrate a knowledge of basic project management concepts and management tools
7. Perform fundamental desktop management skills using a Linux based operating system
8. Demonstrate a knowledge of wireless LAN
9. Troubleshoot and repair computer hardware and software problems

COURSE OUTCOMES

1. Plan and install a small network connecting to the Internet
2. Troubleshoot network and Internet connectivity
3. Share resources such as files and printers among multiple computers
4. Recognize and mitigate security threats to a home network
5. Configure an integrated wireless access point and wireless client

ASSESSMENT TASKS (FOR COURSE OUTCOMES)

- Assignments 20%
- Midterm Exam 30%
- Final Exam 20%
- Wireshark Labs 30%

PROCESS SKILLS

1. Describe networking standards, concepts, topology, and media including LANs, WANs, the OSI model, cabling, IP addressing, sub-netting, network hardware and various protocols.
2. Explain networking theory and protocols on common network systems.
3. Apply IP routing concepts and router administration, distance vector and link-state based IP routing algorithms, router interfaces, routing tables, and routing protocol configuration and network security concepts.

CONCEPTS & ISSUES

- OSI Reference Model
- TCP/IP Reference Model
- Application Layer protocols
- Transport Layer
- Network Layer
- Link Layer and LANs
- Wireless LANs Multimedia Networking

ASSESSMENT PORTFOLIO

Each degree seeking student is required to maintain an assessment portfolio on Blackboard for his/her time at Williston State College. For this class you should include evidence of completing institutional learning outcomes.

GRADING POLICY

Your final grade in this class is based on the quality of work from participation/attendance, completion of assignments, and exam scores. You will get out of this class what you put into it. I hope you choose to fully engage in this course, gleaning as much information from the course material and each other as possible. It takes more effort to fail a class than to pass it. Whatever assistance or guidance you need, please reach out to the instructor.

Grading is based on the following scale:

90%-100% is an A

80%-89% is a B

70%-79% is a C

60%-69% is a D

59% and below is an F

The instructor reserves the right to assign borderline grades as deemed appropriate. Participation, professionalism, and assignment completion are taken into account.

LATE POLICY

I do not accept late assignments. Please contact me if there is an extenuating circumstance to see if permission will be granted to submit an assignment late; 24- hour notice is preferred.

If you know you will be absent from class, you are still expected to get your work done. Time management is a critical component of life, often best learned in college. When applicable, make arrangements with me to receive an assignment or schedule an exam prior to your absentia. Unless these arrangements are made in advance, no late assignments will be accepted.

I'm willing to work with your circumstances to ensure your success; however, for this to be possible, there needs to be clear and open communication, initiated by you.

ACCESSIBILITY STATEMENT

Williston State College is committed to providing equal access to students. If you have a disability which may impact your performance, attendance, or grades in this course that requires accommodations, you must first register with WSC Accessibility Support Services. Please note that classroom accommodations cannot be provided until your instructors receive an Accommodations Form, signed by you and the Accessibility Support Services Coordinator.

IMPORTANT DATES

- Last day to drop: August 30, 2023.
- Last day to withdraw: November 9, 2023.
- For important dates concerning holidays, last date to withdraw from class, etc., please visit the WSC catalog available on the website: <https://www.willistonstate.edu>

ACADEMIC RESOURCES

Take advantage of academic resources available to you at Williston State College:

- Communication Lab: Supplemental instruction is provided to assist students who are either having difficulty or desiring extra help with specific subjects. The Communication Lab assists with composition, writing, communication, and public speaking. The Communication Lab is located in Stevens Hall 120. Students should make appointments at wsc.writinglab@willistonstate.edu. You can also call the Comm. Lab 701-774-4511.
- Math Lab: Supplemental instruction is provided to assist students who are either having difficulty or desiring extra help with specific subjects. The Math Lab assists with all math needs. The Math Lab is located in Stevens Hall Science Lounge.
- Learning Commons: It's not just the Library anymore. In addition to the normal library functions (book checkout, research assistance, etc.), the Learning Commons serves a number of other functions. In the Learning Common you can check out study rooms, check out graphic calculators, utilize computers and print school related materials. Technical support for your online courses is also available in the Learning Commons. For technical support please stop in the Learning Commons or call 701.774.4590 or email wsc.extendedlearning@willistonstate.edu or call 701.774.4226.
- NetTutor: Web-based program that offers live tutoring services in a variety of subject areas at no cost to the student. With NetTutor you can access live tutors, ask a question, and come back the next day for a response, and/or submit writing pieces to be reviewed. If you have further questions or need assistance in using this great tool, please stop in the Learning Commons in Stevens Hall or contact the Extended Learning department at wsc.extendedlearning@willistonstate.edu

STUDENT ACADEMIC INTEGRITY

Work submitted for this course must follow Student Academic Integrity as cited in the WSC Student Code of Conduct:

Acts of cheating and plagiarism are prohibited. Cases of academic dishonesty may be treated as an academic matter or as a disciplinary matter at the discretion of the instructor.

Cheating is defined as fraud, deceit, or dishonesty in an academic assignment. It includes using or attempting to use materials or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.

Plagiarism is presenting someone else's work or ideas as your own, with or without their consent, by incorporating it into your work without full acknowledgement. All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition.

Self-plagiarism is the use of one's own previous work in another context without citing that it was used previously.

The instructor may reflect the incident of academic dishonesty through the assignment of the student's grade in the course. If the student has a grievance related to this action, that grievance would be directed to the Chair of the department in which the course is housed.

Alternatively, the instructor may refer the case as a disciplinary matter to the Vice President for Academic Affairs. The Vice President for Academic Affairs may refer the case to the Student Review Committee for action.

Breach of academic integrity may result in failure of the assignment, exam, and/or class.

STUDENT RESPONSIBILITIES:

- You are expected to read the relevant materials and participate in class discussions in a timely manner.
- You are expected to respect your fellow students and the Instructor in online and on campus discussions.
- It is your responsibility to ask questions when you are uncertain about assignments or course materials.
- If you have questions concerning grades, you should contact the Instructor immediately. You are responsible for checking Blackboard in a timely fashion to ensure that the grade recorded is your correct grade.
- It is your responsibility to contact the Instructor as soon as possible if you are encountering any issues that would hinder your performance in this class.
- You are responsible for earning your grade (with the Instructor making every effort to help you learn the material).
- If you are concerned about your grade, you should speak to the Instructor **NO LATER** than mid-term. No consideration will be given to request to adjust your grade at the end of the semester unless there is an error in calculations.

GRIEVANCE POLICY

Occasionally, students are dissatisfied with some dimension of the course. In such cases, students should first schedule a meeting with the instructor. If the student and instructor cannot reach a satisfactory resolution, the student should schedule a meeting with the Chair of the Department. (See the Student Code of Conduct.)

TITLE IX

Survivors of sexual assault, domestic violence, and sexual harassment: please be aware that as an instructor, I am legally obligated to report all instances of sexual assault, domestic violence, and sexual harassment involving students. If you would like to speak to someone confidentially, please contact the WSC Counselor at (701)774-4212 (they are NOT mandated to report such instances).

ATTENDANCE AND PARTICIPATION

As an on-campus class, participation and attendance is crucial to fully engage and learn the subject matter. Students who have not shown to class by Friday, September 2 will be reported for non-attendance and dropped from the class. Attendance and participation is considered through assignments, participation in class activities, and attendance etc. Students are expected to attend class regularly. If you anticipate being absent for a class, notify the instructor *before the class begins*. If you miss a class, you are still expected to complete all work and are responsible for getting notes from a classmate. Failure to notify the instructor of the absence prior to the start of class will result in earning a “0” grade for any in-class activities, assignments, and/or participation points.

Attendance involves not just physical presence in the classroom, but engagement in the class as well. Headphones are not allowed to be in ears during class, as these create a distraction for yourself, other students, and the instructor.

Participation points occur by way of both class attendance and in-class activities. To earn participation points, students must be engaged in the course materials. Showing up late to class, disruptive or inappropriate behavior, or disengagement will result in a reduction of participation points.

This class, as with all college coursework, will require an investment of time. Please anticipate spending 6-9 hours of work each week on this course; 3 of those hours will be in the classroom.

FINAL EXAMS/ACTIVITIES

Students are required to take the final examination or engage in the final activity on the date and at the time presented as part of the course syllabus. Exceptions may be made only in emergency situations and in the case of scheduling conflicts with college sponsored events by promptly submitting a written request detailing the circumstances to the instructor of the course. Your final exam is the week of December 12 – 15, 2022.

SCOPE AND SEQUENCE OF THE COURSE (SEPARTE DOCUMENT ATTACHED AND SUBJECT TO CHANGE)

Week	Date Range	Instruction Includes
1	8/23 – 8/26	
2	8/29 - 9/2	

Week	Date Range	Instruction Includes
3	9/5 - 9/9	
4	9/12 - 9/16	
5	9/19 - 9/23	
6	9/26 - 9/30	
7	10/3 - 10/7	
8	10/10 - 10/14	
9	10/17 - 10/21	
10	10/24 - 10/28	
11	10/31 - 11/4	
12	11/7 - 11/11	
13	11/14 - 11/18	
14	11/21 - 11/25	
15	11/28 - 12/2	
16	12/5 - 12/19	
Finals Week	12/12 - 12/16	