WILLISTON
STATE COLLEGE

CIS 164: FUNDAMENTALS OF NETWORKING I

COURSE SYLLABUS

COURSE INFORMATION

CIS 164: Fundamentals of Networking I, 3 credits, T @ 8:00 – 9:50 AM, PS#116183. 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

Ken Quamme, #117 Western Star Bldg, 701-774-4207, Ken.Quamme@willistonstate.edu

Office Hours: MWF 8-9 PM, TR1-2 PM, or by appointment.

TEXTBOOK & MATERIALS

- http://www.netacad.com
- http://padlet/ken_quamme/CIS164Fall2017
- Blackboard LMS
- Packet Tracer Network Simulator
- Other URLs TBA

The above sites will provide links to the digital curriculum, learning management system and resources for this course.

STUDENT LEARNING OUTCOMES

INSTITUTIONAL OUTCOMES

I. Students will demonstrate effective communication skills.
II. Students will use reasoning skills to analyze and solve problems.

PROGRAM OUTCOMES

A. Demonstrate computer network installation, maintenance and repair skills
B. Design, install and troubleshoot a Local Area Network (LAN)
C. Describe the fundamentals of Wide Area Networking (WAN)
D. Apply knowledge and interact with Windows server technologies to manage users, active
E. directory, network infrastructure configuration and server applications
F. Demonstrate a knowledge of computer network security concepts and techniques
G. Demonstrate a knowledge of basic project management concepts and management tools
H. Perform fundamental desktop management skills using a Linux based operating system
I. Demonstrate a knowledge of wireless LAN
J. 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)

Packtet Tracer Activities 25%

Assessment tasks deal with how you will measure student learning. A critical component of learning is to work in lab/simulations. CIS 164 provides an opportunity to learn via various tasks to complete and the Packet Tracer Simulation is one.

Labs 25%

The labs in CIS 164 provide the students a great opportunity to work in teams and explore and research the tasks presented in the labs.

Chapter Assessments 20%

The students will complete the assessment from each chapter to help determine strengths and weaknesses in understanding the material and content presented.

Final Lab project 15%

The final lab project is a culmination of their packet tracer and lab activities during the semester.

Final Assessment 15%

The final assessment is a comprehensive multiple choice tool to help the students better understand the basics of networking.

PROCESS SKILLS

- Describe networking standards, concepts, topology, and media including LANs, WANs, the OSI model, cabling, IP addressing, sub-netting, network hardware and various protocols.
- Explain networking theory and protocols on common network systems.
- 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 your syllabus, evidence of completing learning outcomes, and a reflection paper of what you learned in this class.

(For the students at Dakota College, Lake Region State, Turtle Mountain Community College and Valley City State University, they are not required to complete this.)

GRADING POLICY

A=(100-90%), B=(89-80%), C=(79-70%), D=(69-60%), F=(59-0%)

DISABILITY 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 Accessibilities Support Services. Please note that classroom accommodations cannot be provided until your instructors receive an Accommodations Form, signed by you and the Disability Support Services Coordinator.

IMPORTANT DATES

•   Last day to drop: August 30, 2017
•   Last day to withdraw: November 9, 2017
•   For important dates concerning holidays, last date to withdraw from class, etc., please visit the WSC catalog available on the website: www.willistonstate.edu or the Fall 2017 term schedule.

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.

• 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 room 120.

• 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. Get help with Blackboard and other Distance Ed questions. The "technology counter" provides an opportunity to play with some of the latest technology. Computers and printers available. If you have questions, call (701-774-4226). To contact the Office of Extended Learning please email wsc.extendedlearning@willistonstate.edu.

• Smart Thinking: Web based program that offers live tutoring services in a variety of subject areas at no cost to the student. With SmarThinking 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 Katie Peterson at 701-774-4594.

STUDENT ACADEMIC INTEGRITY

Work submitted for this course must follow Student Academic Integrity as cited in the 2016-2017 Catalog, p. 20:

Integrity of the academic process requires that credit be given where credit is due. Accordingly, it is a breach of academic integrity to present as one's own work the ideas, representation or works of another, or to permit another to present one's work without customary and proper acknowledgement of authorship. Students are expected to conduct themselves at all times within permissible limits of assistance as stated by the faculty.

Students will be held responsible for any breaches of academic integrity. Some of the more common breaches of academic integrity include but are not limited to: Cheating, plagiarism, forgery, fabrication, facilitation, or aiding academic dishonesty; theft of instructional materials or tests; unauthorized access or otherwise manipulating laboratory equipment or computer programs without proper authorization; alteration of grades or permanent files; misuse of research data in reporting results; use of personal relationships to gain grades or academic favors; or otherwise attempting to obtain grades or credit through fraudulent means. These breaches of academic integrity are also viewed as misconduct and are treated accordingly.

Students who violate the Student Academic Integrity guidelines may face scholastic or disciplinary consequences. Instructors that treat the case as a scholastic matter have the authority to decide how the violation will affect the student's grade in the course. If the instructor has treated the case as a scholastic matter involving a course grade and the student has a grievance related to this action, that grievance shall be processed as outlined in the WSC Student Code of Conduct. Instructors that treat the case as a disciplinary matter will refer the case to the Vice President for Student Affairs for possible resolution. If final resolution does not occur, the Vice President for Student

Affairs may refer the case to the Student Review Committee. The Committee will handle the matter according to the procedure outlined in the WSC Student Code of Conduct. A written report of the incident will be placed in the student's academic file in the admission and Records Office and will be withdrawn when the file becomes inactive. A copy of the report will be provided to the faculty advisor. Students are advised to become familiar with the campus copyright policy as outlined in the WSC Student Code of Conduct.

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 Moodle 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 page 10 of the Student Code of Conduct.)

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 meeting time for your final is: Tuesday, December 12, 2017 from 7:30 – 9:30 AM

SCOPE AND SEQUENCE OF THE COURSE (SUBJECT TO CHANGE)

(Scope and Sequence is attached for CIS 164, CIS 165, CIS 267, CIS 268 in a PDF file on your learning management URL. http://padlet.com/ken_quamme/CIS164Fall2017

Week 1: Chapter 1   Explore the Network

Week 2: Chapter 2   Configure a Network Operating System

Week 3: Chapter 3   Network Protocols and Communications

Week 4: Chapter 4   Network Access

Week 5: Chapter 5   Ethernet

Week 6: Chapter 6   Network Layer

Week 7: Chapter 7   IP Addressing

Week 8: Chapter 8   Subnetting IP Networks

Week 9: Chapter 9   Transport Layer

Week 10:Chapter 10 Application Layer

Week 11:Chapter 11 Build a Small Network

Week 12: Review OSI Model

Week 13: Review IP Addressing

Week 14: Review Subnetting

Week 15: Prep for Lab Final

Week `16: Prep for Lab Final and Present Final Lab

Final Exam: Written