



Course Prefix/Number/Title: CIS 141 Introduction to Cybersecurity

Number of Credits: 3

Course Description: This course will provide an introduction to concepts related to Cybersecurity. Students will learn safe practices which can be deployed to secure computer systems. Students will gain an understanding of different tools which can be used to defend attacks on computer systems. Special emphasis will be given to systems and applications that non-CS majors will likely to encounter in daily life. In addition to lecture classes, security lab exercises will be conducted to perform hands-on experiments on safe security practices.

Pre-/Co-requisites: None

Course Objectives: Students will learn basic cyber security terminology; have skills for keeping up to date on cyber security issues; and be able to identify information assets. Identify main malware types; awareness of different malware propagation methods; and skills for preventing malware infections. Describe cryptography terminology; be able to use cryptography for email; be aware of applications of cryptography

Instructor: Trisha Nelson

Office Dakota College Downtown, 120 East Burdick Expressway - Minot

Office Hours: 11:00-1:00 and 2:30-4:00 T, Th; Virtual appointments available by appointment

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Lecture/Lab Schedule: MWF 1:00

Textbook(s): OER; digital curriculum

Course Requirements: Instruction procedures include lecture, class discussion and participation, individual assistance and tests. Grades will be based on homework, discussion, case project, and quizzes.

A = 90-100% B = 80-89% C = 70-79% D = 60-69% F = below 60%

All assignments and quizzes are to be completed by their due dates. Assignments turned in late will not be accepted unless the instructor has been notified in advance and has agreed to accept it at a later date.

Tentative Course Outline:

Week 1: Introduction and Threat Landscape

Week 2: Understanding Current Threats and Securing Digital Information

Week 3: Authentication, Passwords, Two-factor Authentication  
Week 4: Endpoint Security  
Week 5: Malware, Viruses and Protection  
Week 6: Networking and Communications  
Week 7: Privacy and Standards  
Week 8: Cryptography and Encryption  
Week 9: Digital Signatures and Certificates  
Week 10: Network Security, Firewalls, VPN and IDS  
Week 11: Cloud and Virtualization Security  
Week 12: When Your Defenses Fail and Incident Response  
Week 13: Laws and Computers  
Week 14: Managing security risks  
Week 15: Cybersecurity Resilience  
Week 16: Case Project and Final

General Education Competency/Learning Outcome(s) OR CTE Competency/Department Learning Outcome(s): Employ industry-specific skills in preparation for workplace readiness.

Relationship to Campus Focus: The course focuses on knowledge and application of technology.

Classroom Policies:

- Students are required to complete all class activities.
- Attendance is vital to success. Absences and arrangements must be made with the instructor prior to class time.
- The instructor reserves the right to remove anyone causing disruptions or showing disrespect to others. The instructor will interpret and declare what is considered disruptive or disrespectful behavior.
- Students are to silence or turn cell phones off during class.

Student Email Policy:

Dakota College at Bottineau is increasingly dependent upon email as an official form of communication. A student's campus-assigned email address will be the only one recognized by the Campus for official mailings. The liability for missing or not acting upon important information conveyed via campus email rests with the student.

Academic Integrity:

According to the DCB Student Handbook, students are responsible for submitting their own work. Students who cooperate on oral or written examinations or work without authorization share the responsibility for violation of academic principles, and the students are subject to disciplinary action even when one of the students is not enrolled in the course where the violation occurred. The Code detailed in the Academic Honesty/Dishonesty section of the Student Handbook will serve as the guideline for cases where cheating, plagiarism or other academic improprieties have occurred.

Disabilities or Special Needs:

Students with disabilities or special needs (academic or otherwise) are encouraged to contact the instructor and Disability Support Services.

## Title IX:

Dakota College at Bottineau (DCB) faculty are committed to helping create a safe learning environment for all students and for the College as a whole. Please be aware that all DCB employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers) are required to report information about such discrimination and harassment to the College Title IX Coordinator. This means that if a student tells a faculty member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the College's Title IX Coordinator. Students wishing to speak to a confidential employee who does not have this reporting responsibility can find a list of resources on the DCB Title IX webpage.