

# Course Syllabus

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**Course Prefix, Number, and Title:**

CSC-134 Intro to Cyber Operations

**Credits:**

3

**University Name:**

Dakota State University

**Academic Term/Year:**

Spring 2020

**Last date to Drop and receive 100% refund:**

1/22/2020

**Last date to Withdraw and earn a grade of 'W':**

4/6/2020

**Course Meeting Time and Location:**

Online

**Instructor Information:****Name:**

Dylan Johnson

**Office:**

East Hall 324

**Phone Number(s):**

605-256-5098

**Email Address:**

Dylan.Johnson@dsu.edu

**Office Hours:**

TBD

Please check the D2L course site for the most up to date office hours.

I'm often in my office or on campus outside of scheduled office hours. Feel free to drop me an email any time, and we can setup a time to meet that's convenient for both of us.

## **Approved Course Description:**

### **Catalog Description:**

This course will introduce students to cyber operations principles including, but not limited to wireless communications, legal issues, applied cryptography, and user experience. Special attention will be paid to the legal authorities necessary when conducting a cyber operation from the military and government perspectives, and how they differ from consumer-level legal ramifications of cyber attacks.

## **Prerequisites:**

### **Course Prerequisite(s):**

None

### **Technology Skills:**

Students should be comfortable with the basic operation of their computer, including Windows 10 and Microsoft Office. A DSU-issued tablet is required for on campus students. Those students who choose to opt out of the tablet program are solely responsible for meeting any technology requirements.

## **Course Materials:**

### **Required Textbook(s):**

None

### **Required Supplementary Materials:**

Students must have high-speed internet access and administrative permissions on their PC.

### **Recommended Textbook(s):**

The Basics of Hacking and Penetration Testing, 2<sup>nd</sup> Edition  
Patrick Engebretson  
978-0124116443

The Basics of Web Hacking: Tools and Techniques to Attack the Web, 1<sup>st</sup> Edition  
Josh Pauli  
978-0124166004

### **Optional Materials:**

None

## **Student Support:**

### **DSU Knowledge Base:**

The DSU Knowledge Base contains links and resources to help students by providing information about the following topics: User Accounts & Passwords, Academic Tools & Resources, Software & Apps Support, WiFi & Network Access, Campus Emergency Alert System, Campus Printing, IT Security & Safe Computing, and the Support Desk (which is there to help both on and off-campus students). The Knowledge Base can be accessed through the link below:

- [DSU Knowledge Base](#)

## D2L Support for Students:

The D2L Support for Students site is designed to provide DSU students a D2L support resource center that contains user guides, tutorials, and tips for using the D2L learning environment. The D2L Support for Students site can be accessed through the link below:

- [DSU D2L Support Resources for Students](#)

## Course Delivery and Instructional Methods:

The course will be delivered on campus as a lecture class with various in class examples and exercises, labs, and assignments.

## Classroom Policies:

### Attendance and Make-up Policy:

It is expected that students will attend all in class sessions throughout the semester to learn new material, review in class examples, and work on class exercises. Assignments will largely be based on the material covered in the lectures.

Students should do their best to turn assignments in on time. However, in an effort to best accommodate special situations, a special late assignment policy will be used.

- Students will have up to **three (3) late days** to use throughout the semester. These days will be tracked in the D2L grades section.
- Any one assignment may be turned in up to **two days (48 hours)** late and still receive full credit.
- Any length of time past the time the assignment is due from just one second to 24 hours will use one of the three permitted days.
- Any unused late days will be applied to the student's final score as one point of extra credit per unused day.
- Students do not need to inform the professor of their intent to use a late day nor the reason.
- Late days may only be used on regular out-of-class assignments, not in class exercises, quizzes, or exams.

Quizzes and exams are to be taken within the given/assigned time frame or PREVIOUSLY arranged with the instructor.

Students are expected to check their DSU email and the D2L course site daily to ensure important changes or assignment updates are communicated.

**Note:** It is the unfortunate truth that major life events (e.g. demise of a loved one) may pull us away from learning objectives and schedules. Please let me know as soon as possible if you are experiencing or expect to experience such an event and I will be more than happy to work with you. This communication needs to happen **before** deadlines of assignments, quizzes, tests, etc. to be able to accommodate your situation.

## Accessibility Statement:

Dakota State University strives to ensure that physical resources, as well as information and communication technologies, are accessible to users in order to provide equal access to all. If you encounter any accessibility issues, you are encouraged to immediately contact the instructor of the course and Dakota State University's ADA Office, which will work to resolve the issue as quickly as possible.

DSU's ADA Office is located in the Learning Engagement Center and can be contacted by calling 605-256-5121 or emailing [dsu-ada@dsu.edu](mailto:dsu-ada@dsu.edu). Students seeking ADA accommodations (such as non-standard note taking or extended time and/or a quiet space taking exams and quizzes) can log into the DSU portal to access <https://portal.sdbor.edu/dsu-student/student-resources/disability-services/Pages/default.aspx/> for additional information and the link to the Disability Services Request Form. You will need to provide documentation of your disability and the ADA Coordinator must confirm the need before officially authorizing accommodations.

## Academic Honesty Statement:

Cheating and other forms of academic dishonesty run contrary to the purpose of higher education and will not be tolerated in this course. Please be advised that, when the instructor suspects plagiarism, the Internet and other standard means of plagiarism detection will be used to resolve the instructor's concerns. The South Dakota Board of Regents Student Academic Misconduct Policy can be found here: [SDBOR Policy 2.33](#). All forms of academic dishonesty will result in a zero for that assignment.

## Communication and Feedback:

### Preferred Email Contact Method:

Dylan.Johnson@dsu.edu

### Email Response Time:

Usually within 24 hours

### Feedback on Assignments:

Students will usually receive grades and feedback within one week after the due date. The class will be notified if a more significant delay is expected.

Assignment grades and feedback will not be released until either all students have turned in the assignment or 48 hours have passed to accommodate the late work policy.

## Requirements for Course Interaction:

- **Be vocal and prompt:** If you run into any issue, do not hesitate to let the instructor know. Write down what happened to provide the instructor or the Help Desk with clues to figure out what might have gone wrong so they may better resolve the issue. Email the instructor when you have any questions or are unclear about something.
- **Write clearly and describe fully:** In face-to-face communication, we can clarify and explain immediately if we find anything missing in what we said or if others do not understand a statement. In online communication, it's often difficult to tell if such miscommunication occurs. To minimize possible misinterpretation or confusion, it is important to write the message clearly and fully describe the issue.

- **Be respectful:** Whether you are receiving or sending an email, or participating in an online discussion, it is important to be courteous and respectful of others who might have different cultural, language, or religious backgrounds. Whenever you disagree with others' opinions, keep in mind that a good discussion focuses on issues and questions. Others may have points in what they say. Avoid words that might cause personal offense.
- **Use emoticons only where appropriate:** In the online environment, tone of voice or facial expressions can't help convey or interpret meanings. Emoticons can be used in conjunction with text to complement or supplement messages, but they may not be familiar to all, so be cautious when using symbols and emoticons. It is better to explain ideas fully and clearly.
- **Use discussion boards for group discussion/information sharing:** Discussion boards are intended for sharing messages with the whole class or group. If a message is intended for only one individual and is not of general interest or concern to the class, use email instead to send that person a private message.
- **Check spelling and follow grammar rules:** Be sure to check your spelling and grammar prior to sending your email messages or postings to the discussion board. Avoid writing messages in all capital letters. THIS IS GENERALLY UNDERSTOOD AS SHOUTING!
- **Think twice before pushing the "Send" button:** Make sure that the message you have just composed is really what you want to say. Think about how the recipient(s) may feel about or interpret the message before you press the "Send" button. It is much easier to adjust or revise before sending than correcting or apologizing afterwards.

## Student Learning Outcomes:

Students will be proficient in basic software security and will have an understanding of cyber operations. The specific skills and competencies covered are listed in the topics below.

## Evaluation Procedures:

### Assessments:

Labs  
 Research Assignments  
 Quizzes  
 Exams  
 Attendance Checks/Challenges

### Final Examination:

May 4<sup>th</sup> – May 8<sup>th</sup>

### Performance Standards and Grading Policy:

Students are expected to successfully complete all assigned labs and assignments, and correctly respond to all examinations given. Code that does not compile will be rewarded with a poor grade. Ensure your code compiles, use comments to describe what you are doing in the code, and use proper spacing. The lack of these three items will result in reduced points.

Grading will be on a point-by-point basis. The final letter grade will be based on the following scale:

- 90% - 100% . . . . . "A"
- 80 - 89.9% . . . . . "B"

- 70 - 79.9% . . . . . "C"
- 60 - 69.9% . . . . . "D"
- Less than 60% . . . . . "F"

**Student Verification Statement and Proctoring Policy:**

Federal law requires that universities verify the identity of students when course materials and/or course assessment activities are conducted either partially or entirely online. A student’s Desire2Learn (D2L) login and password are intended to provide the student with secure access to course materials and are also intended to help the university meet this federal mandate. Some DSU Faculty also require the use of a proctor for exams in distance-delivered (Internet) courses and this requirement provides a second level of student identity verification. Students are responsible for any proctoring fees, if applicable. Finally, an instructor who uses web conferencing technology may require students to use a webcam during exams, as another means of student identity verification through voice and visual recognition.

**Tentative Course Outline and Schedule:**

Week	Date	Topics
1	1/13	Legal
2	1/20	Legal/Governmental Authority
3	1/27	Intro to Linux/Networking
4	2/3	Intro to Linux/Networking
5	2/10	PTES/OSINT
6	2/17	Active Recon/Nmap
7	2/24	Vulnerabilities
8	3/2	Exploitation
9	3/9	NO CLASS – Spring Break
10	3/16	Exploitation
11	3/23	Web Hacking
12	3/30	Web Hacking
13	4/6	Post Exploitation
14	4/13	Password Cracking/Python
15	4/20	Reverse Engineering
16	4/27	Review

**Freedom in Learning Statement:**

Students are responsible for learning the content of any course of study in which they are enrolled. Under Board of Regents and University policy, student academic performance shall be evaluated solely on an academic basis and students should be free to take reasoned exception to the data or views offered in any course of study. It has always been the policy of Dakota State University to allow students to appeal the decisions of faculty, administrative, and staff members and the decisions of institutional committees. Students who believe that an academic evaluation is unrelated to academic standards but is related instead to judgment of their personal opinion or conduct should contact the dean of the college which offers the class to initiate a review of the evaluation.