

CSEC-378/CSEC-418 - Host Based Security - Course Syllabus

Course Information:

CSEC-378/418 – Host Based Security – Spring 2022 Quarter

Class Time – Monday Nights 5:45PM - 9:00PM

Meeting Location – Online Zoom Meetings

Undergrad Section (CSEC-378) Class Prerequisites - NET-363 or CSC-374

Grad Section (CSEC-418) Class Prerequisites - NET-413

Instruction Type – Live Synchronous Zoom Meetings & Asynchronous Recordings

Course Description:

Principles of host-based security. Review of security methods used to ensure the confidentiality, integrity, and availability of the information stored on a host. The class will cover OS configuration, access control, anti-malware, public facing application security, host-based intrusion detection/prevention, host-based firewalls and audit & compliance. Course includes laboratory work with both the Linux and Windows operating systems.

Instructor Information:

Instructor – Kevin Naughton

Office Hours Location – Zoom Classroom

Office Hours – Mondays after class. If you would like to meet remotely outside this time, please ask and we will schedule a time to meet.

Email address – knaught4@depaul.edu

Email Response Policy:

Please include your first name, last name and the course code in the subject line of emails.

I use an email filter to sort and alert on the incoming emails I receive from students so that I see them more quickly. If you meet these criteria when sending an email, I will respond to you as soon as possible, but at the most within 48 hours. If you do not meet these criteria, I may not see your message right away, especially on weekends or holidays.

Example undergraduate subject line: “CSEC-378 – Your Name – Question About Lab 2”

Example graduate subject line: “CSEC-418 – Your Name – Question About Lab 2”

Course Management System:

This course utilizes DePaul’s D2L Course management system. Assignments will be submitted through the appropriate assignment submission dropbox on D2L. In the event that D2L is inaccessible, sending the assignment as an attachment to me via email **before the deadline** will count for full credit. Once D2L is accessible again, **the same assignment document** (the hash of the two submissions must match) will need to be submitted through D2L to ensure that it is subject to TurnItIn plagiarism checking.

Important Dates:

Relevant Add/Drop/Grading dates are detailed below. A more complete list of dates can be found by viewing the full University Academic Calendar linked below.

- 03/26/2022 - Begin SQ2022 Classes
- 04/01/2022 - Last day to add classes to SQ2022 schedule
- 04/08/2022 - Last day to drop SQ2022 classes with no penalty
- 05/13/2022 - Last day to withdraw from SQ2022 classes
- 06/03/2022 - END SPRING QUARTER 2022
- 06/17/2022 - GRADES DUE: SPRING 2022

Link to the full University Academic Calendar:

<https://academics.depaul.edu/calendar/Pages/default.aspx>

Textbooks:

There is no assigned textbook for this class.

Textbooks on many of the topics covered in this class are available as a part of your tuition at DePaul's Safari Books website through the DePaul Library. You can find supplemental reading here if you are struggling with a topic and would like a different perspective.

<https://proquestcombo.safaribooksonline.com/>

Learning Outcomes:

Upon completion of this course, students will be able to:

- differentiate between and identify common network protocols
- use network diagnostic tools to troubleshoot network and systems problems
- analyze and implement host-based firewall rules on Windows and Linux
- install, configure and manage services on Windows and Linux hosts
- create basic scripts using both PowerShell and bash
- implement and understand system security best practices

Course Agenda:

| Class Date | Topic | Assignments Due Sunday Before Class (Subject to Change) |
|----------------------|--------------------------------|------------------------------------------------------------|
| Week 1 – 03/28/2022 | Network & Systems I | |
| Week 2 – 04/04/2022 | Network & Systems II | |
| Week 3 – 04/11/2022 | Linux I | Quiz 1 |
| Week 4 – 04/18/2022 | Linux II | Minilab 1 |
| Week 5 – 04/25/2022 | Linux III | Minilab 2 |
| Week 6 – 05/02/2022 | Windows I | Lab 1, Lab 2, Quiz 2, Midterm Exam |
| Week 7 – 05/09/2022 | Windows II | |
| Week 8 – 05/16/2022 | Security Concepts I | Minilab 3, Quiz 3 |
| Week 9 – 05/23/2022 | Security Concepts II | Minilab 4, Lab 3, Lab 4 |
| Week 10 – 05/30/2022 | No Class – Memorial Day | Quiz 4, Final Exam |
| Week 11 – 06/06/2022 | No Class | Extra Credit |

Grading Scale:

Grading will be based on the correctness and completeness with which you fulfill the class objectives and assignments. I will grade all assignments on a percentage basis, and will convert that percentage to a letter grade. **Grades will not be curved in this class.**

Percentage to Letter Grade Conversion:

| | |
|---------------|-----------|
| 93.0% - 100% | A |
| 90.0% - 92.9% | A- |
| 87.0% - 89.9% | B+ |
| 83.0% - 86.9% | B |
| 80.0% - 82.9% | B- |
| 77.0% - 79.9% | C+ |
| 73.0% - 76.9% | C |
| 70.0% - 72.9% | C- |
| 67.0% - 69.9% | D+ |
| 60.0% - 66.9% | D |
| 0.0% - 59.9% | F |

Total Percentage Points per Assignment Type:

| | | |
|----------|-----|-------------------------------------|
| Labs | 40% | 10% per lab assignment (4 total) |
| Minilabs | 20% | 5% per minilab assignment (4 total) |
| Quizzes | 10% | 2.5% per quiz (4 total) |
| Exams | 30% | 15% per exam (midterm and final) |

Extra Credit:

Four extra credit assignments will be posted on D2L after the midterm and will be worth 10 points in total. **No additional extra credit will be made available beyond these 10 points.**

Extra credit points will be added to your average directly, and will be essentially counted as makeup points. (Ex. If your grade is 82/100 in the class, and you complete 8 points of extra credit, your grade will be 90/100, not 90/108).

Midterm & Final:

The midterm and final will be exams consisting of multiple choice and true/false questions. The exams will be made available on d2l. Each exam will cover content from one half of the class, the final exam will not be cumulative and will only cover material taught in the second half of the class. The exams will be open note and open internet, but will have a strict time limit enforced, and only one attempt allowed.

Assignment Submission Policy:

All assignments are due on their assigned due date unless otherwise announced. If there is a change to an assignment due date it will be discussed in class and posted on D2L. **Late assignments will not be accepted.** If there is a problem with the submission dropbox on D2L email the assignment to me prior to the deadline and it will count for full credit. If I receive your email after the deadline it will be considered late and count for no credit. If you submit the incorrect assignment via email or the D2L dropbox your submission will not be accepted, and the correct assignment will not be accepted late. Double check your submission to ensure you have submitted the correct file.

Attendance:

Live in-person lecture will be conducted weekly on Monday nights 5:45pm-9:00pm via Zoom. Lectures will be recorded and made available on D2L by Tuesday morning. The recordings will be available to all students in the class regardless of which section they are enrolled in. Aside from the first week when the University mandates that some form of attendance is taken, attendance will not be taken, and will never count for any credit in this class.

If you need to miss an in-person class session you will be able to watch the recording to stay up to date with the class material.

Class Cancellation:

If the University is officially closed for a holiday or other reason, class will not be held. Otherwise, we will have class.

Incompletes:

If you wish to request an incomplete, please discuss it with me first. Students must formally request an incomplete by filling out an incomplete grade request form:

cdm.depaul.edu/Student-Resources/Pages/Grading-Policies.aspx

Online Course Evaluations:

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation online in CampusConnect.

Academic Integrity & Plagiarism:

This course is subject to the University's Academic Integrity Policy. I expect that you have read and understand this policy <http://academicintegrity.depaul.edu>. Consider this policy to be a part of this syllabus. **Violations of this policy will be taken extremely seriously and reported to DePaul and CDM administration.**

Academic Policies

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar, which can be found at <https://academics.depaul.edu/calendar>.

Information on enrollment, withdrawal, grading and incompletes can be found at <http://www.cdm.depaul.edu/Current%20Students/Pages/PoliciesandProcedures.aspx>

Students with Disabilities:

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential. To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at:

Phone number: (312) 362-8002

Fax number: (312) 362-6544

Emergency Plan:

An emergency can occur at any time, suddenly and without warning. Proper planning is essential to minimize the impact of any emergency on the university community, operations and facilities. The following link provides detailed information on Emergency Evacuation and Fire Alarm safety: <https://resources.depaul.edu/emergency-plan/emergency-evacuation/Pages/Evacuation.aspx>. The University will use the DPU Alert to announce school closing or other emergencies. In the event of an emergency evacuation, the primary outdoor assembly area for CDM will be Grant Park (Southeast corner of Jackson and Michigan Ave).

Preferred Name & Gender Pronouns:

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the quarter so that I may make appropriate changes to my records. Please also note that students may choose to identify within the University community with a preferred first name that differs from their legal name and may also update their gender. The preferred first name will appear in University related systems and documents except where the use of the legal name is necessitated or required by University business or legal need. For more information and instructions on how to do so, please see the Student Preferred Name and Gender Policy at <http://policies.depaul.edu/policy/policy.aspx?pid=332>

Notice of Copyright

Materials in this course—unless otherwise indicated—are protected by United States copyright law [Title 17, U.S. Code]. Materials are presented in an educational context for personal use and study and should not be shared, distributed, or sold in print - or digitally - outside the course without permission.

As a student your ability to post or link to copyrighted material is also governed by United States copyright law. The law allows for students to post or link to copyrighted materials within the course environment when the materials are pertinent to course work. Instructors- or other staff of the institution - reserve the right to delete or disable your post or link if in their judgment it would involve violation of copyright law. **If you are found to be in violation, a grade of F will be assigned for the course and an academic integrity violation will be filed.**

Changes to Syllabus:

This syllabus is subject to change as necessary to better meet the needs of the course. Significant changes are unlikely, and will be thoroughly addressed in class. Minor changes, especially to the course agenda, are possible at any time. If a change occurs, it will be thoroughly addressed during class, and posted under Announcements in D2L.