



(ECE 572) – Security, Privacy, and Data Analytics

Term – Summer 2019 (201905)

Instructor

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Office Hours

Days: Wednesdays
Time: 2:00 pm- 4:00 pm
Location: ECS 218

Course Objectives

- To explore the foundations of information security and privacy issues from an engineering perspective
- To learn analytics and statistical techniques and methodologies in information security

Learning Outcomes

Students will be able to:

- Deploy analytics and statistical packages, tools, and applications
- Simulate security events and scenarios
- Apply concepts, techniques, and methods to quantify levels of security and privacy required and achieved
- Use established protocols and procedures to countermeasure adversaries and attacks

Syllabus

Key distribution and authentication security; Internet communication security; Web application security; mobile device security; cloud computing security; security data collection framework.

Analytics introduction; analytics software and tools; analytics and incident response; simulations and security processes; access analysis; security intelligence.

A-Section(s): A01 / CRN 30331

Days: MTh

Time: 1:00 pm - 2:20 pm

Location: Clearihue Building A308

Required Text

Title: Information Security Analytics: Finding Security Insights, Patterns, and Anomalies in Big Data

Author: Talabis, McPherson, Miyamoto, Martin

Publisher: Elsevier

Year: 2015

References: conference and journal articles

Assessment:

Test 1:	25%	Due Dates: June 27 th , 2019
Test 2:	25%	Due Dates: July 18 th , 2019
Project	50%	Due Dates: August 1 st , 2019

Note: Failure to complete all laboratory requirements will result in a grade of N being awarded for the course.

Failure to pass the final exam will result in a failing grade for the course.

The final grade obtained from the above marking scheme for the purpose of GPA calculation will be based on the percentage-to-grade point conversion table as listed in the current Graduate Calendar. <https://web.uvic.ca/calendar2019-05/grad/academic-regulations/grading.html>

Note to Students: Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the Chair of the Department by email or the Chair's Assistant to set up an appointment.

Accommodation of Religious Observance:

<https://web.uvic.ca/calendar2019-05/grad/registration/Registration.1.17.html#>

Policy on Inclusivity and Diversity:

<https://web.uvic.ca/calendar2019-05/general/policies.html>

Standards of Professional Behaviour: You are advised to read the Faculty of Engineering document Standards for Professional Behaviour, which contains important information regarding conduct in courses, labs, and in the general use of facilities.

<https://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf>

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult the entry in the current Graduate Calendar for the UVic policy on academic integrity.

<https://web.uvic.ca/calendar2019-05/grad/academic-regulations/academic-integrity.html>

Equality: This course aims to provide equal opportunities and access for all students to enjoy the benefits and privileges of the class and its curriculum and to meet the syllabus requirements. Reasonable and appropriate accommodation will be made available to students with documented disabilities (physical, mental, learning) in order to give them the opportunity to successfully meet the essential requirements of the course. The accommodation will not alter academic standards or learning outcomes, although the student may be allowed to demonstrate knowledge and skills in a different way. It is not necessary for you to reveal your disability and/or confidential medical information to the course instructor. If you believe that you may require accommodation, the course instructor can provide you with information about confidential resources on campus that can assist you in arranging for appropriate accommodation.

Alternatively, you may want to contact the Centre for Accessible Learning located in the Campus Services Building.

The University of Victoria is committed to promoting, providing, and protecting a positive, and supportive and safe learning and working environment for all its members.

Course Lecture Notes

Unless otherwise noted, all course materials supplied to students in this course have been prepared by the instructor and are intended for use in this course only. These materials are NOT to be re-circulated digitally, whether by email or by uploading or copying to websites, or to others not enrolled in this course. Violation of this policy may in some cases constitute a breach of academic integrity as defined in the UVic Calendar.

Sexualized Violence Prevention and Response at UVic

UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behaviour. We encourage students to learn more about how the university defines sexualized violence and its overall approach by visiting www.uvic.ca/svp. If you or someone you know has been impacted by sexualized violence and needs information, advice, and/or support please contact the sexualized violence resource office in Equity and Human Rights (EQHR). Whether or not you have been directly impacted, if you want to take part in the important prevention work taking place on campus, you can also reach out:

Where: Sexualized violence resource office in EQHR; Sedgewick C119

Phone: 250.721.8021

Email: svpcoordinator@uvic.ca

Web: www.uvic.ca/svp