

CIS*6550

Privacy, Compliance, and Human Aspects of Cybersecurity



1 INSTRUCTOR

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2 AIMS & OBJECTIVES

2.1 Calendar Description

This course provides an in-depth view of the privacy, regulatory, and ethical issues surrounding cybersecurity. It covers methods of mitigating/treating privacy risks associated with emerging technologies that collect, manage, and analyze data. This course also examines data protection regulations and compliance strategies.

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2.3 Learning Outcomes

Upon successful completion of this course, students will have demonstrated the ability to:

1. Identify common privacy and compliance risks associated with technologies (such as the Internet of Things) and data analytics algorithms (such as artificial intelligence and data mining);
2. Apply best practices to ensure privacy, meet regulatory requirements, and address compliance issues;

3. Analyse and integrate ethics, regulations, and best practices in various phases of data lifecycle such as collection, storage, analysis, usage, and sharing of data;
4. Design and/or implement privacy and compliance ensuring data management platform;
5. Establish processes and procedures for data practices such as transparency, accountability, access, and compliance in an organization; and
6. Work collaboratively in teams to conduct research and communicate rational and reasoned arguments using appropriate methods.

2.4 Instructor’s Role and Responsibility to Students

The role of the instructor is to deliver lectures, facilitate discussions, provide an environment for collaborative learning, and provide feedback to students.

3 TEACHING AND LEARNING ACTIVITIES

3.1 Timetable

Lectures: 3 hours per week

3.2 Course Topics and Schedule

Week	Topic
Week 1	Introduction to privacy, compliance, cybersecurity ethics with human in the loop
Weeks 2-3	Review and comparison of global privacy and compliance regulations
Weeks 4-5	Privacy and compliance enhancing technologies and best practices
Weeks 6-7	Data management and processing lifecycle
Weeks 8-9	Privacy, compliance and ethical implications of data analytics
Week 10	Students seminars
Weeks 11-12	Information assurance management: policy development, relationship building, establishment of cybersecurity programs

4 LEARNING RESOURCES

4.1 Course Website

Course material, news, announcements, and grades will be regularly posted to the CIS*6580 Courselink site. Students are responsible for checking the site regularly.

4.2 Required Resources

Recommended resources:

- Peter P. Swire and Kenesa Ahmad. Foundations of Information Privacy and Data Protection: A Survey of Global Concepts, Laws and Practices. IAPP: 2012.
- J.C. Cannon. Privacy in Technology: Standards and Practices for Engineers and Security and IT Professionals. IAPP: 2014.
- Dave Eggers. *The Circle*. Knopf, 2013.

Additional materials will be provided by the instructor, weekly.

5 ASSESSMENT

5.1 Dates and Distribution

Assignment	Due Date	Weighting	Learning Outcome(s) Assessed
Assignment 1	TBD	20%	LO1, LO2, LO4
Assignment 2	TBD	20%	LO1, LO3, LO5
Presentation	TBD	10%	LO1, LO3
Final project	TBD	50%	LO1-LO6

5.2 Assessment Descriptions

Assignment 1: Students will be provided with a real-world scenario and will be required to analyze the associated privacy risks. They will also be required to develop a solution to mitigate those risks. Students will be asked to submit their findings and other artifacts they have created.

Assignment 2: Students will be provided with a real-world scenario and will be required to analyze the associated regulatory and compliance risks. They will also be required to develop a solution to mitigate those risks. Students will be asked to submit their findings and other artifacts they have created.

Presentation: Students in groups of two will be required to present a real-world case study on ethical, social, political, or technical implications of privacy/compliance breaches/threats.

Final Project: This will be a group research (and development) project (maximum 3 students/group). Students will be required to find a real-world privacy and compliance related project to perform research on and to design and develop solution. Depending on the scope of the final project, the deliverables can be software code and appropriate supplementary materials (e.g., source code, documentation, manual), data analytics algorithms along with the dataset/s and a report on the results and findings, or novel processes and procedures, checklists, best practices or standards.

5.3 Course Grading Policies

Accommodation of Religious Obligations: If you are unable to meet an in-course requirement due to religious obligations, please email the course instructor within two weeks of the start of the semester to make alternate arrangements. See the graduate calendar for information on regulations

and procedures for Academic Accommodation of Religious Obligations:
https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/sec_d0e2228.shtml

Passing grade: In order to pass the course, students must obtain a grade of 65% or higher on the total mark of all assessments.

6 UNIVERSITY STATEMENTS

6.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly; e-mail is the official route of communication between the University and its students.

6.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Graduate Calendar: <https://www.uoguelph.ca/registrar/calendars/graduate/current/index.shtml>

6.3 Drop Date

Courses that are one semester long must be dropped by the end of the fortieth class day; two-semester courses must be dropped by the last day of the add period in the second semester. The regulations and procedures for changing graduate course registration are available in the Graduate Calendar: <https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

6.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments; you may be asked to resubmit work at any time.

6.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least seven days in advance and not later than the fortieth class day.

More information can be found on the SAS website: <https://www.uoguelph.ca/sas>

6.6 Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community—faculty, staff, and students—to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff, and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Graduate Calendar:

https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/sec_d0e2642.shtml

6.7 Recording of Materials

Presentations that are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

6.8 Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs:

<https://www.uoguelph.ca/academics/calendars>