



THE UNIVERSITY OF WINNIPEG

APPLIED COMPUTER SCIENCE

Course Number: ACS-2821-050

Course Name: Information Security in Business

Instructor Information

Instructor: Philemon Pak

E-mail: p.pak@uwinnipeg.ca

Office Hours: Tuesday: 14:00 - 15:00 (Via Zoom)

Class Meeting Time: Tuesday: 18:00 – 21:00 (Via Zoom)

Note: All class time and office hours will be posted on the Nexus course calendar.

Course Web Page: Nexus

Important Dates

First Class:	Tuesday, September 8, 2020
Midterm Exam:	October 20, 2020
Reading Week (No Classes):	October 11 – October 17, 2020
Final Withdrawal Date w/o academic penalty:	Tuesday, November 17, 2020
(A minimum of 20% of the work on which the final grade is based will be evaluated and available to the student before the voluntary withdrawal date)	
Last Class:	Tuesday, December 1, 2020
Final Exam:	TBD
University closures: Thanksgiving Day	Monday, October 12, 2020
Remembrance Day	Wednesday, November 11, 2020

Course Objectives/Learning Outcomes

Information Security in Business will focus on the business aspect of information security, the why and what is information security and its importance to a business. Aside from security technologies that can be implemented to safeguard these assets, aspect of governance and management of information security will be considered as part of Information Security. The development of good corporate information technologies policies and procedures, management and operational framework and controls, and information security culture and awareness will be discussed in this course.

Remote Learning

Lectures will be delivered live during the scheduled times via Zoom (Zoom meeting request can be found in the Nexus calendar). All lecture sessions will be recorded and posted in Nexus when it becomes available.

All course material including lecture notes, slides and recorded lecture videos, assignment details (see evaluation criteria section) will be available on Nexus.

Both midterm test and final exam will be delivered online through Nexus. Midterm test will be conducted during class time (see important date section). Final exam date and time will be announced later in class, and will be delivered online through Nexus.

Students must be available via Zoom during the lecture times.

- Students must display their real/full name
- Use of Video is optional.
- Participants must be muted when not speaking
- Students may interact via chat, voice or gestures

Students can find answers to frequently asked questions related to remote learning here:

<https://www.uwinnipeg.ca/covid-19/remote-learning-faq.html>.

Note: A permitted or necessary change in mode of delivery may require adjustments to important aspects of course outlines, like class schedule and the number, nature, and weighting of assignments and/or exams.

Evaluation Criteria For ACS-2821 Students

Assignments: 30%

- There will be 3 assignments worth 10% each.
- Due at 11:59:59 pm on due date.
- No late or handwritten assignment will be accepted. Only under special circumstances e.g. medical, death in a family, and etc. Circumstances are subject to approval before late assignment will be accepted and with a 20% penalty off for each late day.
- Assignments are to be submitted through Nexus. Written assignments should be in PDF (Portable Document Format) only.
- When submitting your assignment files, please name the file with your name, student ID and the assignment number, e.g. John Doe – 12345 – Assignment 1. So the file name should be John Doe – 12345 – Assignment 1.pdf.
- Assignments that do not meet all the requirements, including those for the submissions, may not be accepted or a portion of the marks will be deducted. Marks will be deducted for not following the file submission format, file naming format and instruction in the assignment.

- Multiple submissions are not permitted. Students may submit a partially completed assignment, and will receive credit for those attempted problems.

Midterm Exam: 20%

- During regular class time.
- 1 hours 15 minutes duration

Final Exam: 50%

- The final exam covers all material discussed in the course.
- 3 hours duration

Note: Students should contact the instructor as soon as possible if extenuating circumstances require missing an assignment, test, or examination. A medical certificate from a practicing physician may be required before any adjustments are considered.

Final Letter Grade Assignment

Historically, numerical percentages have been converted to letter grades using the following scale. However, instructors can deviate from these values based on pedagogical nuances of a particular class, and final grades are subject to approval by the Department Review Committee.

A+	90+ - 100%	B+	75 - 79%	C	60 - 64%
A	85 - 90%	B	70 - 74%	D	50 - 59%
A-	80 - 84%	C+	65 - 69%	F	below 50%

Test/Exam Requirements

- Photo ID is required for the final exam.
- Midterm and final exams will be delivered via Nexus. Students must have video capability and be prepared to present their student ID.
- Midterm and final exams is open book.
 - Students are permitted to view only the following authorized course material:
 - Class notes, slides, recordings, sample code, assignment descriptions and solutions posted by the instructor
 - Course textbook
 - Student’s own course notes and assignment submissions
 - Students may use an external tool such as a text editor or IDE to write answers to questions before entering them into the exam
 - Students may contact the instructor to ask questions
 - External resources (or any material not listed above) are NOT PERMITTED
 - External website other than Nexus during midterm and final exam are NOT PERMITTED
 - Communication with others (except the instructor) is NOT PERMITTED

- All work must be entirely the students' own. Collaboration or sharing of work is NOT PERMITTED.

Students with documented disabilities, temporary or chronic medical conditions, requiring academic accommodations for tests/exams (e.g., private space) or during lectures/laboratories (e.g., note-takers) are encouraged to contact Accessibility Services (AS) at 204-786-9771 or accessibilityservices@uwinnipeg.ca to discuss appropriate options. All information about a student's disability or medical condition remains confidential.
<https://www.uwinnipeg.ca/accessibility-services>.

Students may choose not to attend classes or write examinations on holy days of their religion, but they must notify their instructors at least two weeks in advance. Instructors will then provide opportunity for students to make up work examinations without penalty. A list of religious holidays can be found in the 2020-21 Undergraduate Academic Calendar online at <http://uwinnipeg.ca/academics/calendar/docs/important-notes.pdf>

Prerequisite and Restriction Information*

(This information can be found in the UW General calendar)

- A grade of at least C in ACS-1803(3), or permission of the Department Chair.

*Make sure that you have the necessary prerequisites to take this course. If you have not successfully completed the above listed course(s), it is in your interest to go to student registration office and officially drop the course.

Regulations, Policies, and Academic Integrity

Academic dishonesty is a very serious offense and will be dealt in accordance with the University's policies.

Avoiding Academic Misconduct: Students are encouraged to familiarize themselves with the Academic Regulations and Policies found in the University Academic Calendar at: <https://uwinnipeg.ca/academics/calendar/docs/regulationsandpolicies.pdf>
Particular attention should be given to subsections 8 (Student Discipline), 9 (Senate Appeals) and 10 (Grade Appeals). Please note, in particular, the subsection of Student Discipline pertaining to plagiarism and other forms of cheating.

Detailed information can be found at the following:

- Academic Misconduct Policy and Procedures: <https://www.uwinnipeg.ca/institutional-analysis/docs/policies/academic-misconduct-policy.pdf> and <https://www.uwinnipeg.ca/institutional-analysis/docs/policies/academic-misconduct-procedures.pdf>

- UW Library video tutorial “Avoiding Plagiarism”
<https://www.youtube.com/watch?v=UvFdxRU9a8g>

Uploading essays and other assignments to essay vendor or trader sites (filesharing sites that are known providers of essays for use by others who submit them to instructors as their own work) involves “aiding and abetting” plagiarism. Students who do this can be charged with Academic Misconduct.

Non-academic misconduct. Students are expected to conduct themselves in a respectful manner on campus and in the learning environment irrespective of platform being used. Behaviour, communication, or acts that are inconsistent with a number of UW policies could be considered “non-academic” misconduct. More detailed information can be found here:

- Respectful Working and Learning Environment Policy
<https://www.uwinnipeg.ca/respect/respect-policy.html>,
- Acceptable Use of Information Technology Policy
<https://www.uwinnipeg.ca/institutional-analysis/docs/policies/acceptable-use-of-information-technology-policy.pdf>
- Non-Academic Misconduct Policy and Procedures: <https://www.uwinnipeg.ca/institutional-analysis/docs/student-non-academic-misconduct-policy.pdf> and <https://www.uwinnipeg.ca/institutional-analysis/docs/student-non-academic-misconduct-procedures.pdf>.

Copyright and Intellectual Property. Course materials are the property of the instructor who developed them. Examples of such materials are course outlines, assignment descriptions, lecture notes, test questions, and presentation slides—irrespective of format. Students who upload these materials to filesharing sites, or in any other way share these materials with others outside the class without prior permission of the instructor/presenter, are in violation of copyright law and University policy. Students must also seek prior permission of the instructor/presenter before, for example, photographing, recording, or taking screenshots of slides, presentations, lectures, and notes on the board. Students found to be in violation of an instructor’s intellectual property rights could face serious consequences pursuant to the Academic Misconduct or Non-Academic Misconduct Policy; such consequences could possibly involve legal sanction under the Copyright Policy
https://copyright.uwinnipeg.ca/docs/copyright_policy_2017.pdf

Privacy

Students have rights in relation of the collecting of personal data the University of Winnipeg:
<https://www.uwinnipeg.ca/privacy/admissions-privacy-notice.html>.

More information:

- Zoom and Privacy: <https://www.uwinnipeg.ca/privacy/zoom-privacy-notice.html>
- Testing/Proctoring: <https://www.uwinnipeg.ca/privacy/zoom-test-and-exam-proctoring.html>.

Email Communication Requirements, Class Cancellation, Correspondence from and with Students and Withdrawing from Course

Emails from accounts at uwinnipeg.ca are usually not filtered by the UofW email filter. Thereby it is recommended electronic communication used for the course utilize a UofW email account to minimize the risk of filtering. The use of an external email address maybe block and filter by the anti-spam system, e.g. Gmail.

When emailing the instructor, you are to use the UofW Webmail system, i.e. webmail.uwinnipeg.ca to communicate with the instructor. Do not use the Nexus email system, i.e. mail.nexus.uwinnipeg.ca, Nexus mailbox are not monitored on a regular basis.

The email sent to the instructor must include your full name, your student #, and the COURSE # and SECTION # (like ACS-2821-050) in the subject line of your email. A respectful manner is also expected in the email communications.

When it is necessary to cancel a class due to exceptional circumstances, the course instructor will make every effort to inform students via uwinnipeg email and Nexus.

Students are reminded that they have a responsibility to regularly check their uwinnipeg e-mail addresses to ensure timely receipt of correspondence from the University and/or the course instructor.

Please let course instructor know if you plan on withdrawing from the course. Note that withdrawing before the VW date does not necessarily result in a fee refund.

Required Text Book(s)/Reading List

Information Security: Principles and Practices

Merkow & Breithaupt

2nd Edition, 2014

Pearson Education, Inc.

ISBN-13: 9780789753250

There may be additional reading materials that will be provided in class.

Class notes and notices will be posted in the Nexus course website. Students are responsible for material covered in class and announcements made in class and posted in Nexus.

Course Outline and Topic (Tentative)

Introduction to Information Security

What is information security?

Why is information security important in a business?

What are the key objectives of information security?

Who are the attackers?

Information Security Management

Governance and Risk Management

- IT Security Management
- IT Risk Assessment
- IT Security Controls, Plans, and Procedures
- IT Security Awareness Program and Initiatives

Business Continuity Planning and Disaster Recovery Planning

Law, Investigations, and Ethics

Information Security Technology

Physical Security Control

Operations Security

User Authentication and Access Control

Cryptography

Telecommunications, Network, and Internet Security

- Firewall and Intrusion Detection/Prevention System
- Malicious Software and Denial of Services Attacks

Software Development Security

Securing the Future

Note that all topics listed may not be covered and may be offered in a slightly different time order.