



# THE UNIVERSITY OF WINNIPEG

## APPLIED COMPUTER SCIENCE

**Course Number: ACS-2821-001**

**Course Name: Information Security in Business**

### **Instructor Information**

**Instructor:** Philemon Pak

**Office:** 3C07

**E-mail:** [p.pak@uwinnipeg.ca](mailto:p.pak@uwinnipeg.ca)

**Office Hours:** Wed: 14:30 - 15:30

**Class Meeting Time:** Mon & Wed: 16:00 – 17:15

**Room No:** 3D01

**Course Web Page:** <https://courses.acs.uwinnipeg.ca/2821-001>

### **Important Dates**

First Class:	Sep 4, 2019
Midterm Exam:	Oct 9, 2019 (In Class and Close Book)
Reading Week (No Classes):	Oct 13 – Oct 19, 2019
Remembrance Day (No Class):	Nov 11, 2019
Final Withdrawal Date w/o academic penalty:	Nov 12, 2019
(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:	Dec 3, 2019
Final Exam:	Dec 14, 2019 09:00 – 12:00

### **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.

## **Evaluation Criteria For ACS-2821 Students**

### ***Assignments: 30%***

- There will be 3 assignments worth 10% each.
- Due at 11:59:59 pm on due day.
- No late assignment will be accepted, and 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 by email in PDF (Portable Document Format) files to a designated course email account. The email account will be given once it is determine and setup.
- When sending the file via email, please name the file with your name, student ID and the assignment number, e.g. John Doe – 12345 – Assignment 1. And the subject line should have the course number and assignment no., i.e. ACS-2821-001 Assignment 1.
- 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%***

- Closed-book in-class midterm exam.

### ***Final Exam: 50%***

- Closed-book final exam.
- The final exam covers all material discussed in the course.

## **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 at exam is required.
- You are expected to write the test/exam on its given day.
- No electronic devices (e.g. cell/smart phone, laptop, scientific calculators, translators, etc.) are permitted.
- Midterm and final exams are closed-book.
- Simple calculators can be used though. Simple calculators are subjected to test and can be denied use at mid-term test and final examination times.
- Unless a medical certificate is provided, no accommodation is made for missed exams.

## **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.

## **Email Communication Requirements**

- 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.
- Use 'ACS-2821' as subject in email communication related to the course.

## **Services for Students**

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](mailto: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 2019-20 Undergraduate Academic Calendar online at <http://uwinnipeg.ca/academics/calendar/docs/important-notes.pdf>

All students, faculty and staff have the right to participate, learn, and work in an environment that is free of harassment and discrimination. The UW Respectful Working and Learning Environment Policy may be found online at <https://www.uwinnipeg.ca/respect>.

## **Misuse of Computer Facilities, Plagiarism, and Cheating**

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

*Avoiding Academic Misconduct and Non-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>
- 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>

*Misuse of Filesharing Sites.* 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.

*Avoiding Copyright Violation.* Course materials are owned by the instructor who developed them. Examples of such materials are course outlines, assignment descriptions, lecture notes, test questions, and presentation slides. 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 photographing or recording slides, presentations, lectures, and notes on the board.

## **Required Text Book(s)/Reading List**

### **Information Security: Principles and Practices**

Merkow & Breithaupt

2nd Edition, 2014

Pearson Education, Inc.

ISBN-13: 9780789753250

And any additional reading materials that will be provided in class.

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

## **Course Outline (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.

### **Additional Course Related Information**

- When it is necessary to cancel a class due to exceptional circumstances, instructors will make every effort to inform students via uwinnipeg email (and/or using the preferred form of communication, as designated in this outline), as well as the Departmental Assistant and Chair/Dean so that class cancellation forms can be posted outside classrooms
- Students are reminded that they have a responsibility to regularly check their uwinnipeg e-mail addresses (and/or using the preferred form of communication, as designated in this outline) to ensure timely receipt of correspondence from the university and/or their course instructors
- 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.
- Please note that withdrawing before the VW date does not necessarily result in a fee refund
  - November 12 is final VW date for classes that begin in September and ends December 2nd
- Make-up classes scheduled:
  - December 3 for November 11 Remembrance Day
- No classes:
  - October 14 – October 18 - Reading Week – No Classes
  - November 11 Remembrance day - University closed – No Class