



# THE UNIVERSITY OF WINNIPEG

## APPLIED COMPUTER SCIENCE

**Course Number:** ACS-1803-055

**Course Name:** Introduction to information Systems

**Course Webpage:** <http://courses.acs.uwinnipeg.ca/1803-055/>

### Instructor Information

**Instructor:** Kevin Robertson

**E-mail:** [ke.robertson@uwinnipeg.ca](mailto:ke.robertson@uwinnipeg.ca)

**Office Hours:** Thursdays 5:00-6:00 pm **Office:** 3C07

**Class meeting time:** Thursdays 6:00-9:00 pm **Room:** 3C01

### Important Dates

1. First Class: Thursday, January 9, 2020
2. Midterm Test: Thursday, Feb 27, 2020
3. Reading Week (no classes): February 17-21, 2020
4. Final Withdrawal Date w/o academic penalty\*: Friday March 13<sup>th</sup>, 2020
5. Last Class: Thursday, April 2, 2020
6. Final Exam (Comprehensive): Thursday, April 9, 2020 at 6:00 p.m.  
Room: TBA
7. University closures: Louis Riel Day Monday, February 17, 2020  
Good Friday Friday April 10, 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. It is recommended that you talk to your lecturer before making the decision to withdraw from the course.

### Course Objectives / Learning Outcomes

The course provides students with a basic conceptual understanding of computers and the basics of database and telecommunication technology. The course also addresses the question: "how can computers help a business (or other organization)?" Highlights of business application systems that support the functions of accounting, finance, marketing, human resource management and manufacturing will be provided.

Enterprise Resource Planning Systems, Customer Relationship Management Systems, Executive Information Systems, Decision Support Systems and Expert Systems are also covered. Further, topics of

eBusiness and eCommerce are covered. The final section of the course introduces the student to the process of developing a customized computer-based information system, presenting the system development life cycle and outlining the work of a systems analyst.

In this course students will develop information system literacy as it differs from computer literacy. They will develop a thorough overview of the different ways computers can be used in organizational management and operations.

### **Evaluation Criteria**

1. Assignments (24%)
  - Assignment 1 due January 30<sup>th</sup>, 2020
  - Assignment 2 due February 27<sup>th</sup>, 2020
  - Assignment 3 due March 19<sup>th</sup>, 2020
  - Assignment 4 due April 2<sup>nd</sup>, 2020

All assignments must be **printed, stapled** or **placed in a folder** and handed in at the start of class on the due date. No handwritten assignments will be accepted, no late assignments will be accepted without special circumstances with potential mark reductions of 20% made for each day late.

2. Midterm Tests (26%)
  - During the regular class time on February 27<sup>th</sup>, 2020
3. Final Exam (50%)
  - Cumulative, covering all material discussed in the course.
  - 3 hours duration

*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 or additional actions are considered.

### **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.
- Unless a medical certificate is provided, no accommodation is made for missed exams.
- Missed exam will receive a mark of zero, unless a medical certificate is provided, no accommodation is made for missed exams.
- Please contact the instructor as soon as possible if extenuating circumstances require you to miss a class, assignment, test or examination.

- Keep a copy of all class work (e.g., assignments, tests) handed back in case there is an error in recording of marks by the instructor.

### **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 – 89 %	B	70 – 74%	D	50 – 59%
A-	80 – 84%	C+	65 – 69%	F	below 50%

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

- Fundamentals of Information Systems (8<sup>th</sup> edition), by Stair and Reynolds; Course Technology, ISBN13: 978-1-305-08216-8 **or**
- Fundamentals of Information Systems (9<sup>th</sup> edition), by Stair and Reynolds; Course Technology, ISBN13: 978-1-337-09753-6
- Additional Readings and Class Notes will be made available through the course web site.

Lecture notes will be posted on the course website on the day of class. Recommended readings from the books should be completed before the next class and questions may be posted via email on at the start of the next class.

**Prerequisite Information\*** (This information can be found in the UW Undergraduate Academic calendar)

There are no formal pre-requisites listed in the calendar. However, it is assumed that students have a basic computer orientation.

### **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>.

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>
- "Avoiding Plagiarism": <https://www.youtube.com/watch?v=UvFdxRU9a8g>

*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.

Research Ethics: Students conducting research interviews, focus groups, surveys, or any other method of collecting data from any person, including family member, must obtain research ethics approval before commencing data collection. Exceptions are research activities done in class as a learning exercise. For submission requirements and deadlines, please visit:

<http://www.uwinnipeg.ca/research/human-ethics.html>

### **Class Cancellation, Correspondence with Students and Withdrawing from Course**

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/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 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.

### **Topics to be covered (tentative list).**

The topics listed below relate to the overall course, where relevance in today's IMS environment is becoming of little value some subjects may not be covered.

1. Definition of Data, information, and Information Systems
2. Database concepts; database modeling, data warehousing and mining. Data integrity, privacy, security principles. Database Management Systems.
3. Information needs at different levels in the organization. Operational, Tactical and Executive information Systems. Information Processing modes (Batch, Online, etc.)
4. Basic transaction processing and management reporting systems in: accounting, finance, marketing, human resources, manufacturing and supply chain management. Electronic Data Interchange, Enterprise Resource Planning systems.
5. Other types of business systems: Customer Relationship Management (CRM) Systems, Decision Support Systems, Geographic Information Systems, Expert Systems, Knowledge Management

Systems, Global Information Systems, Vertical Area Systems, Office Automation Systems; Web-based information systems.

6. Using information systems for competitive advantage. The Web and electronic commerce; mobile commerce; Internet business models. Internet security related to monetary transactions.
7. Basic orientation to computer technology: hardware, programming languages and non-procedural software. System and application software. Operating systems.
8. Telecommunication / networking basics. Internet fundamentals; intranets, extranets.
9. Security, ethics and internal control in organizational information systems. System security components. Access controls, application controls, system controls. Information system auditing. Trust Services (e.g., WebTrust) and seals.
10. Developing a customized information system: strategic considerations in systems development; the system development life cycle: investigation, analysis, design, development, implementation, post implementation review.
11. Assessment and acquisition of information systems; proprietary, open source software; end-user development; in-house applications, cloud computing.
12. The work of a systems analyst; the Information Systems Department and its interaction with business departments.