



# THE UNIVERSITY OF WINNIPEG

## APPLIED COMPUTER SCIENCE

**Course Number:** ACS-4906/3-001 / GACS-4906/3-001

**Course Name:** Conceptual Modelling

### Instructor Information

Instructor: Ron McFadyen                      Office:            3D21  
Class Meeting Time: MW 2:30-3:45            Room No:        3D03  
Office Hours:                                      W 10:00-11:00  
Web page:        [courses.acs.uwinnipeg.ca/4906](http://courses.acs.uwinnipeg.ca/4906)  
E-mail:            [ron.mcfadyen@acs.uwinnipeg.ca](mailto:ron.mcfadyen@acs.uwinnipeg.ca)

### Important Dates

First class:    Wed Jan 4, 2017  
Midterm Tests:                                        Mon Jan 30 & Mon Feb 13, 2017  
Final Exam:    Mon Apr 10, 2017, 9:00 a.m.  
Reading Week:                                        Feb 19-25, 2017 (no classes)  
Final Withdrawal Date w/o academic penalty:    Wed Mar 1, 2017  
(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)

### Additional Course Related Information

1. When it is necessary to cancel a class due to exceptional circumstances, instructors will make every effort to inform you via uwinnipeg email, as well as the departmental assistant and Chair/Dean so that class cancellation forms can be posted outside classrooms.
2. Your uwinnipeg email address will normally be used for course related correspondence.
3. Please note that withdrawing before the VW date does not result in a fee refund.
4. Class make-up days are scheduled at the end of term for courses that conflict with holidays.

### Course Objectives/Learning Outcomes

The primary objective is to provide the student with additional skills and techniques suitable for the design of databases. Students will gain experience with an advanced modelling tool: Visual Studio with the NORMA plugin for Object Role Modeling (ORM).

## Evaluation Criteria

Assignments (20 %)

4 assignments.

Late assignments are accepted with a penalty of 25% per day late (up to 2 days late).

Assignments are equally weighted.

All work must be done with an appropriate software tool.

Tests (1st test 10%, 2nd test 20 %)

Unless a medical certificate is provided, no accommodation is made for missed tests or assignments.

Final Exam (50 %)

## 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%
A	85-89%
A-	80-84%
B+	75-79%
B	70-74%
C+	65-69%
C	60-64%
D	50-59%
F	Below 50%

## Test/Exam Requirements

Photo ID is not required

No computer, calculator or any other electronic device (e.g. cell phone) is permitted.

## Accessibility Services

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 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

<http://www.uwinnipeg.ca/accessibility>

## UW Respectful Working and Learning Environment

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 [www.uwinnipeg.ca/respect](http://www.uwinnipeg.ca/respect)

We ask that you please be respectful of the needs of classmates and instructors/professors by avoiding the use of unnecessary scented products while attending lectures. Exposure to

scented products can trigger serious health reactions in persons with asthma, allergies, migraines or chemical sensitivities. Please consider using unscented necessary products and avoiding unnecessary products that are scented (e.g. perfume).

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

Information Modeling and Relational Databases; Halpin/Morgan; 2nd edition;  
Morgan Kaufmann Publishers; 978-0-12-373568- 3

### **Prerequisite Information** (This information can be found in the UW General calendar)

A grade of at least C in ACS-3902/3.

### **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. Be sure that you have read and understood Regulations & Policies #8, starting on page 27, in the 2016-2017 UW Course Calendar or

<http://uwinnipeg.ca/academics/calendar/docs/regulationsandpolicies.pdf>

Students facing a charge of academic or non-academic misconduct may choose to contact the University of Winnipeg Students' Association (UWSA) where a student advocate will be available to answer any questions about the process, help with building a case, and ensuring students have access to support. For more information or to schedule an appointment, visit our website at [www.theuwsa.ca/academic-advocacy](http://www.theuwsa.ca/academic-advocacy) or call 204-786-9780.

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

Topics from chapters 1 through 11, and 14 will be chosen to illustrate the design and use of a conceptual schema. This includes (as time permits):  
modeling approaches; information levels; first steps; uniqueness constraints; mandatory roles; value, set, and subtype constraints; object role modeling; entity-relationship modeling; data modeling in UML; advanced modeling issues; mapping from ORM to ER, to UML, to relational; and schema transformations.