THE UNIVERSITY OF WINNIPEG

APPLIED COMPUTER SCIENCE

http://www.acs.uwinnipeg.ca

Course Number: **GACS-7305-001**
Course Name: **Graduate Project**

Instructor Information
Instructor: Ron McFadyen Email: ron.mcfadyen@acs.uwinnipeg.ca
Sponsor: Ron McFadyen (ACS), Zbigniew Izydorczyk (English)
Meeting time and location: Thurs 1:30 pm – 3:30 pm @ 3D21

Prerequisite Information (This information can be found in the UW Graduate Academic Calendar)

- Consent of the Graduate Project Course Coordinator or Department Graduate Program Committee Chair
- Students must complete four courses in the ACS graduate program before they can take the project course

Restrictions (This information can be found in the UW Graduate Academic Calendar)

- Open only to course-based stream students

Important Dates

First Class: Jan 5, 2017
Withdrawal date w/o academic penalty: May 31, 2017
Last Scheduled Class: July 5, 2017
Project Proposal: Jan 15, 2017
Monthly Progress Reports (tentative)
Jan 31, Feb 28, Mar 31, Apr 30, May 31, June 30, July 31
Final Project due date and Presentation: Aug 31, 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.

Course Objectives/Learning Outcomes

The intent of this course is to allow a student to choose an area of specialization and to work on a state-of-the-art project in that area. Suitable projects may include, for example, the implementation and evaluation of new algorithms or the use of modern technologies for novel

applications. Completion of the course requires a written report and an oral presentation. The specific details of the report are determined in consultation with the instructor, but must include a survey of relevant literature, a description and evaluation pertinent to the student's work, and details of software authored by the student.

Roles and Responsibilities

Instructor

The Instructor meets with you regularly, reviews your work, provides consultation throughout the project, and assists with problem resolution. The Instructor assigns grades.

Sponsor

Sponsors the project, provides problem description and functional requirements, approves project proposal, reviews deliverables, provides acceptance for finished system. The sponsor's cooperation is necessary and required. The sponsor participates in the grading process.

Note, the Instructor and Sponsor can be played by the same faculty member.

Evaluation Criteria

Each project is an individual project.

Project Proposal Report (10%)

The project proposal is submitted for approval to the Instructor and the Sponsor. The project proposal is generally no longer than 10 pages in length. Preparing it requires at least one meeting with the Sponsor. The project proposal may contain the following sections (not necessarily all).

- Title page (including project title)
- Introduction and project idea
- Background information
- Literary search
- Problem description
- Theoretical framework
- Requirement definitions and functional specifications
- Proposed System
- Development Environment
- Project plan
- Proposed tests and/or experiments
- Data set
- Proposed verification and validation plans

Project Proposal Presentation (10%)

The proposal presentation should cover the salient points from your report. The instructor, the sponsor, and other students in the course are invited to the proposal presentation. Instructors

from other sections will be invited as well. The presentation is generally no longer than 20 minutes in length, followed by a question and answer period.

Monthly Progress Reports (10%)

Progress reports are informal reports that summarize milestones that have been met, planned for the next month, and include a demonstration of a working prototype.

Final Project Report (20%)

A final report is submitted to the Instructor and the Sponsor. The final report may contain the following sections.

- Title page (including project title)
- Abstract
  - 200 words or less
- Keywords
- Introduction
  - Motivation, problem definition, contribution/outcome
- Background
- Relevant information to understand your problem, related works
- Theoretical Framework
- Detailed description of the theory used in your project
- Description should start with fundamental concepts/defns and build upon this
  - foundation to the framework used in your project
- Implementation
- System description
  - Software architecture
  - Hardware architecture
- Development environments
- Code and design diagrams
- Algorithm description
  - Complexity analysis
- Experiments and Results
- Details of the experiments and your observations
- Analysis
- Conclusion
- References

Prototype Implementations (20%)

With each Progress Report the student must submit a working prototype, including all source code and executables.

Final Project Implementation (20%)

Students must submit their working implementation, including all source code and executables.

Final Project Presentation (10%)

The proposal presentation should cover the salient points from your final report, and it may include a demonstration of your application. The presentation is open to the public, and the instructor, the sponsor, and ACS faculty and students will be invited to the final presentation. The presentation is 20-30 minutes in length, followed by a 10 minute question and answer period. Feedback will be requested from ACS faculty members.

Student 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 to discuss appropriate options. All information about a student's disability or medical condition remains confidential
http://www.uwinnipeg.ca/accessibility

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 or call 204-786-9780.

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).

Misuse of Computer Facilities, Plagiarism, and Cheating

Academic dishonesty is a very serious offense and will be dealt with in accordance with the University's policies. Be sure that you have read and understood Student Discipline #9, in the 2016-2017 UW Graduate Academic Calendar
http://uwinnipeg.ca/academics/graduatecalendar/docs/grad-regandpols.pdf).