



# THE UNIVERSITY OF WINNIPEG

## APPLIED COMPUTER SCIENCE DEPARTMENT

### ACS-3901-001 – Principles of Software Project Management

#### **Instructor Information**

**Instructor:** Dr. Sheela Ramanna                      **E-mail:** [s.ramanna@uwinnipeg.ca](mailto:s.ramanna@uwinnipeg.ca)

**Office Hours:** Tuesday 2:30 - 3:30pm (via Zoom)

**Class Meeting Time:** T, Th 1:00 - 2:15pm

**Course Web page:** <http://www.acs.uwinnipeg.ca/3901>

#### **Important Dates**

- First Class: January 7, 2021
- Final Withdrawal Date w/o academic penalty: March 16, 2021 (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).
- Reading Week Break: February 14-20, 2021 (No classes)
- Quiz 1: January 28, 2021
- Quiz 2: February 25, 2021
- Final Exam: TBD (2.5hours)
- Last Class: April 6, 2021
- The university will be closed on February 15 (Louis Riel Day), April 2 (Good Friday)

#### **Additional Course Related Information**

- 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 note that withdrawing before the VW date does not result in a fee refund.
- Class make-up days are scheduled at the end of term for courses that conflict with holidays. None this term

## **Course Objectives**

This course introduces proven principles, methods and techniques for effective planning, scheduling, monitoring and controlling of deliverable-oriented work. This course has been specifically designed to also cover essential project management techniques practised in the 4<sup>th</sup> year capstone ACS-4901/6 Systems Development Project course. Specifically, we will study the following project, product and people competencies:

- Selecting Software Development Lifecycles
- Project Teams and Roles --Team Selection
- Preparing Project Plans, Proposal and SSR
- Software Sizing and Cost Estimation Models
- Scheduling with PERT/CPM
- Risk Management Model
- Software Metrics, CMM model and GQM Paradigm
- Verification and Validation (Reviews, White and Black Box testing)
- Project Tracking and Control
- Quality Assurance and Configuration Management

## **Remote Learning**

All course material will be available on the course website.

Lectures will be delivered live during the scheduled times via Zoom. RECORDING IS NOT PERMITTED. Video of lectures WILL NOT BE POSTED. Students must be available via Zoom during scheduled class meeting times. In addition:

- Students must DISPLAY their real/full name.
- Use of Video is OPTIONAL.
- Participants must be MUTED when not speaking.
- Students may interact via CHAT.

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 content, class schedule and the number, nature, and weighting of quizzes.

## **Lecture Format**

- There will be a 5-10 min recap of the previous lecture
- All questions submitted via Chat during the class will be answered at the END of the lecture
- There will be in-class problem solving sessions for quantitative aspects of this course. The schedule and other details for these sessions will be announced on the first day of class.

## **Evaluation Criteria**

Quiz 1 (During the regular class time)	20%
Quiz 2 (During the regular class time)	30%
Final Exam (2.5 hours)	50%

There will be no assignments in this class. Students who wish to gain experience in practical software project management are strongly advised to take the ACS-4901 course. There will be no makeup quiz. If you miss a quiz, then your second quiz will be worth 50%. All quizzes and final exam are closed book.

*Students should contact the instructor as soon as possible* if extenuating circumstances require missing a QUIZ or the final exam. A medical certificate from a practicing physician may be required before any adjustments are considered.

Quizzes and the final exam will test both factual knowledge and the ability to apply course material to real life situations and problems. Answers on quizzes and the final exam must be meaningful to achieve potential credit.

## **Quiz and Final Exam Requirements**

- Photo ID is required for quizzes and the final exam.
- Quizzes and the final exam will be delivered **via Nexus** and **proctored via Zoom**. Students must have video capability, and video must be TURNED ON for the duration of the exam for proctoring.
- Students may contact the instructor to ask questions
- External resources (or any material not listed above) are NOT PERMITTED
- Communication with others (except the instructor) is NOT PERMITTED

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

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

- Quality Software Project Management by Futrell, Shafer, and Shafer, Prentice Hall, 2002, ISBN: 0-13-091297-8
- Class Notes

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

- A grade of at least C in ACS-1904(3), ACS-2913(3), (or the previous ACS-2911(3) and ACS-2912(3)) and ACS-2814(3) (or the former ACS-2914(3)).

### **Email Communication**

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.

### **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 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> .

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.

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).

### **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 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.

*Research Ethics.* Students conducting research interviews, focus groups, surveys, or any other method of collecting data from any person, including a 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, see <http://www.uwinnipeg.ca/research/human-ethics.html>.

## **Tentative List of Topics**

<b>Topic</b>	<b>Chapters*</b>
Competencies and Definitions, SDLC	Chap.1 and 3
Selecting SDLC -- Review of Process Models	Chap. 4
Project Teams and Roles --Team Selection	Chap.6, 12, 29
Project Planning and WBS -- Project Proposal/Charter	Chap.7 and 8
Tasks, Activities -- Project Plan Creation	Chap. 9
Software Sizing – Size Estimation Models	Chap.10
Estimating Duration and Cost – Cost Estimation Models	Chap. 11
Scheduling – PERT/CPM Scheduling Models	Chap. 14 and 15
Software Requirements Specification—Creating SSR	Chap. 16 and 17
Risk Management – Quantitative Risk Assessment	Chap. 18
Software Metrics – Quantitative Product and Process Metrics Assessment	Chap. 21
V&V- Testing strategies, test coverage and path measures	Chap. 23**
Project Tracking and Control – Quantitative Schedule and Progress Management, Error Tracking	Chap. 25**
SQA and SCM	Chap. 30**, 31**

\* Not all the materials in the above chapters will be covered.

\*\* These chapters are not included in the new edition. Notes will be given and the 2002 edition of the text book is placed on reserve in the library