RRC POLYTECH

Red River College Polytechnic campuses are located on the lands of Anishinaabe, Ininiwak, Anishininew, Dakota, and Dené, and the National Homeland of the Red River Métis.

Course Outline

Course Information

Course Code and Title: COMP-3008 OO System Design

Course Section: All Sections

Department/Program: Applied Computer Education

Total Hours: 80

Credit Hours: 5

COURSE DESCRIPTION:

This course is a continuation of Object-Oriented Systems Analysis with an emphasis on design-level UML modelling, CASE tool instruction, and project management of design alternatives. Iterative and incremental development methodologies are a focus, with particular emphasis on the Unified Process (UP). The combination of OO Systems Analysis and this course will equip students with a good working knowledge of: (i) object-oriented modelling from analysis to design, including user interfaces, persistence, code implementation, and software deployment; (ii) visual modelling with UML; (iii) commercial-grade CASE tools; (iv) industry standard software development processes; and (v) practical techniques for managing a project through multiple iterations. This course promotes professional team-based problem solving and is a pre-requisite for the Industry Project course, which applies these and other learned skills to identify and solve an industry scale problem/opportunity.

RECOGNITION OF PRIOR LEARNING (RPL):

RPL is a process in which students have the opportunity to obtain credit for College-level knowledge and skills gained outside the classroom and/or through other educational programs. It is a process that documents and compares a student's prior learning gained from education, work and life experience to the learning outcomes in College courses/programs. For more information about RPL at RRC Polytech, refer to the RPL website at rrc.ca/RPLservices or A14 - RPL Policy.

For general information and assistance with RPL, contact RRC Polytech's RPL Advisor at 204.632.3094 or rpladvisor@rrc.ca.

ACCESSIBILITY STATEMENT:

RRC Polytech is committed to providing persons with documented disabilities fair and equal access to educational programs, services and facilities. If you are a student with a disability* and require reasonable accommodations, you must connect with Student Accessibility Services (SAS) who will assist in developing and implementing your accommodation plan. Refer to the Student Accessibility Services webpage for information about SAS locations and how to book an appointment. Students with disabilities are also encouraged to have a private discussion with their instructor(s) to facilitate greater understanding of their learning needs.

*RRC Polytech's definition of "disability" is consistent with the Manitoba Human Rights Code. In the educational setting, "disability" refers to a permanent or temporary medical, physical, sensory, mental health (e.g., anxiety, depression), learning, or neurological (e.g., ADHD, Autism Spectrum Disorder) condition that interferes with a student's ability to fully participate in their studies and/or other associated activities.

ACADEMIC INTEGRITY:

Academic Integrity means acting with the values of honesty, trust, respect, responsibility, fairness and courage in learning, teaching and research to ensure that the credentials granted by RRC Polytech accurately represent demonstrated knowledge, skills and abilities. All members of the RRC Polytech community are expected to demonstrate these values through RRC Polytech learning activities, relationships and commitments. Clear expectations will be communicated to students to promote positive academic practices in compliance with RRC Polytech's Academic Integrity policy. Contact academicintegrity@rrc.ca for additional information.

ACADEMIC REQUISITES:

COMP-1258 Object Oriented System Analysis
DBMS-1002 Database Management Systems 1
ADEV-2008 Programming 2

COURSE EQUIVALENCIES:

COMP-2028 OO System Design

COURSE DELIVERY METHODS:

This course is delivered in a blended environment (classroom and online).

The following communication tools will be used in this course:

Red River College email, LEARN News, and MS Teams

Course format:

This course will be delivered in a format of approximately 50% of time spent in lectures (to introduce new material) and 50% work periods (to complete assessments).

RRC POLYTECH

EFFECTIVE DATE:

January 2, 2024

Instructor Information

Instructor's name: Bev Shaw

Email: bshaw@rrc.ca

Office phone: 204-632-2963

Office location: P 414

Office hours: By appointment

Student Readiness

TECHNOLOGY AND EQUIPMENT READINESS:

A Business Information Technology minimum standard configured computer, a reliable high-speed Internet connection, and Microsoft Office. Students will be required to download and install the Astah Professional UML modeling software (instructions and license are provided in the LEARN course shell). In addition, students will need a camera and a headset with high-quality microphone.

STUDENT COMMITMENTS AND CONTACT TIMES:

10 hours of scheduled online class per week.
Approximately 2 hours per week of study/work time outside of classes.
Students must regularly check their Red River College academic email account, and the LEARN shell for news and course updates.

COURSE RESOURCES:

Notes, slides, and examples provided in the LEARN course shell

Textbook(s):

UML 2 and the Unified Process, Arlow and Neustadt, Pearson, 2nd edition

References:

None

Student Learning

LEARNING OUTCOMES AND ELEMENTS OF PERFORMANCE:

By the end of this course of study, you should be able to...

1. Transition analysis level diagrams into design level diagrams
2. Explain characteristics of analysis and design level models
3. Design sequence diagrams that portray interactions among classes
4. Explain the role of architectures in information systems development
5. Catalog and apply software Design Patterns
6. Design User eXperience (UX) components of a design level model
7. Develop models of control within an information system
8. Design a persistence model for storage and retrieval of long-lived objects
9. Design implementation & deployment models of software components.

NOTE: The following dates are subject to change based on the needs of the students at the instructor's prerogative. Students will be notified ahead of time of any changes.

Date	Module/Unit/Week or Important Event	Topic and Learning Outcome(s)	Assessment and Evaluation	Weight
Jan 2	First Day of Classes			
Jan 2 – Jan 8	Add/Drop Week			
Jan 2 – Jan 12	Module 1 / Week 1 & 2	Use Case Realization (Ch 12)	Practical 01 Quiz 1	8% 4%
Jan 15 – Jan 26	Module 2 / Week 3 & 4	Advanced Use Case Realization (Ch 13)	Practical 02 Quiz 2	8% 4%
Jan 29 – Feb 9	Module 3 / Week 5 & 6	Designing Classes (Ch 16 & 17)	Practical 03 Quiz 3	8% 4%
Feb 12 – Mar 1	Module 4 / Week 7 & 8	Designing Relationships (Ch 18)	Practical 04 Quiz 4 Midterm Test	8% 4% 8%
Mar 4 – Mar 15	Module 5 / Week 9 & 10	Interfaces & Components (Ch 19)	Practical 05 Quiz 5	8% 4%
Mar 18 – Mar 29	Module 6 / Week 11 & 12	Design Patterns (Ch 20)	Practical 06 Quiz 6	8% 4%

Apr 1 – Apr 12	Module 7 / Week 13 & 14	Implementation & Design (Ch 23 & 24)	Practical 07	8%
Apr 4	VW Deadline (16-week term)			
Apr 15 – Apr 26	Module 8 / Week 15 & 16	Persistence & User eXperience (Ch 20)	Quiz 7 Final Test	4% 8%
Apr 26	Last Day of Classes (for 16-week term program)			
			Assessment Total:	100%

LETTER GRADE DISTRIBUTION:

Letter	GPA	Percentage
A+	4.5	90 to 100%
A	4.0	80 to 89%
B+	3.5	75 to 79%
B	3.0	70 to 74%
C+	2.5	65 to 69%
C	2.0	60 to 64%
D	1.0	50 to 59%
F	0.0	0 - 49%

A grade of 50% is required to pass this course.

Course Policies

GENERAL ACADEMIC POLICIES:

It is the student's responsibility to be familiar with and adhere to the RRC Polytech Academic Policies. These Policies can be found in the RRC Polytech calendar or online under Academic Matters at rrc.ca/legal/policies.

DATE REVISED:

November 1, 2023

RRC POLYTECH

Mental Health and Well-being at RRC Polytech

Having good personal health and well-being will support your success in this program.

WE ENCOURAGE YOU TO:

- Recognize that stress is an expected part of being a college student.
- Rethink how you view difficulty. Being challenged is actually a part of learning and reaching success.
- Reflect on your role in taking care of yourself throughout the term. Do your best to balance your schoolwork and life demands.
- Reach out to your instructor, program coordinator, or College supports at any time if something is affecting your academic performance. It's always best to reach out early and it's the responsible thing to do.

COLLEGE SUPPORTS READY AND WILLING TO ASSIST YOU:

- Academic Success Centre
- Campus Well-Being
- Equity, Diversity and Inclusion Supports
- Health Services
- Indigenous Student Supports
- International Student Supports
- Library Services
- Student Accessibility Services
- Student Counselling Services
- United Way 211 community resource

AUTHORIZATION:

This course is authorized for use by:

Name Here	Date here
Chair, Department/Program	Date

Approved by Senior Academic Committee March 22, 2023

ALTERNATE FORMATS:

This content is available in alternate formats. To request, please contact accessibility@rrc.ca.