

# RYERSON UNIVERSITY

Ted Rogers School of Information Technology Management  
And G. Raymond Chang School of Continuing Education

## (C)ITM 90A/B – Graduation Project

### COURSE OUTLINE FOR 2020-2021

#### 1.0 PREREQUISITE(S)

Four-year Program/Co-op Students: Successful completion of ALL REQUIRED courses in the first three years of the program and a minimum of 25 completed credits. (Strongly recommend completing Professional Electives from Table I in Semester 5 & 6 to meet minimum requirements).

2 Year CAAT Students: Successful completion of ALL 10 courses in the 1st and 2nd semester of the curriculum.

Note: Since some of the required courses are not offered every semester, it is each student's individual responsibility to manage their course planning to ensure all prerequisites are met. Students who do not have the prerequisite will be dropped from the course.

#### 2.0 INSTRUCTOR INFORMATION

- Name:
- Office Phone Number:
- E-mail address:
- Faculty/course web site(s): <https://my.ryerson.ca>
- Office Location & Consultation hours:
  - Your instructor is available for virtual consultation during scheduled consultation hours. Information on the consultation format is provided in the D2L course shell. If you wish to make an appointment, kindly do so via email to ensure the professor is available.
- E-mail Usage & Limits:

Students are expected to monitor and retrieve messages and information sent through D2L and Ryerson email on a frequent and consistent basis. In accordance with the policy on Ryerson student email accounts ([Policy 157](#)), Ryerson requires that any electronic communication by students to Ryerson faculty or staff be sent from their official Ryerson email account. Messages from other accounts may be disregarded.

### 3.0 CALENDAR COURSE DESCRIPTION

This is a full year project whose scope is the IS function of integrating business processes, functions, and technologies, as part of an enterprise solution. The focus is on the creation of functions, technologies and business processes, as part of an enterprise solution. Value creation through the integrated production and distribution of products, services, and information will be emphasized. Through this project, students will learn to apply models and frameworks, to analyze and integrate business functions, processes, and technologies and communicate solutions concisely. Students will also learn to apply business strategic management capabilities to qualify the models and frameworks being used to integrate the business functions. The project will involve a real-life client organization.

### 4.0 COURSE OBJECTIVES AND LEARNING OUTCOMES

This course is a hands-on application of knowledge and skills student have acquired and developed in the BTM program. In particular, students will form a team of 5-6, and will design a feasible IT solution based on their analysis of business strategies, key business processes, and develop the solution by applying techniques in system analysis and design, database, computer programming, and security.

Upon completion of the course, students will be able to:

- Develop information systems (IS) solutions to real world problems by:
  - Identifying business opportunities and/or problems,
  - Specifying and modeling IS solution requirements
  - Identifying and modeling business processes
  - Developing the various components of IS solutions to solve business problems and/or realize identified business opportunities
- Integrate the application of information technology and management concepts and skills in an applied project. In particular, students will be able to:
  - Perform data analytics and identify issues in existing IS solutions
  - Apply business process management technique, aided with BPMN, to model, analyze and redesign business processes
  - Apply system analysis and design techniques, aided with UML, to model/analyze requirements and develop IS solution designs.
  - Apply database, system design, security, computer programming techniques to develop IS solutions
  - Apply effective project management skills
- Demonstrate strong communication skills

### 5.0 TEXTS & OTHER READING MATERIALS

1. Title: Information Technology Project Management, 9th Edition  
Author: Kathy Schwalbe  
Publisher: Course Technology  
ISBN: 978-01337101356  
ISBN: 978-0-357-23512-6 (eBook)

2. Title: Systems Analysis and Design in a Changing World (7th Edition)  
Author: John W. Satzinger, Robert B. Jackson, Stephen D. Burd  
Publisher: Cengage Learning  
ISBN: 978-1305117204  
ISBN: 978-1-337-00116-8 (eBook)
3. Title: Fundamentals of Business Process Management  
Author(s): Marlon Dumas, Marcello La Rosa, Jan Mendling, Hajo A. Reijers  
Publisher: Springer  
ISBN: 978-3-642-33142-8  
ISBN: 978-3-642-33143-5 (eBook) ( Available free through the library)
4. Title: Database Systems: Design, Implementation, and Management, 13th Edition  
Author: Carlos Coronel & Steven Morris  
Publisher: Course Technology  
ISBN: 978-1337627900  
ISBN: 978-1-337-67862-9 (eBook)
5. Title: Managing and Using Information Systems: A Strategic Approach (6th Edition)  
Author: Kari Pearlson, Carol Saunders and Dennis Galletta  
Publisher: Wiley  
ISBN: 978-1119244288  
ISBN: 978-1-119-25521-5 (eBook)
6. Title: Computer Security: Principles and Practice, 4th Edition  
Author: William Stallings and Lawrie Brown  
Publisher: Pearson  
ISBN: 978-0134794105  
ISBN: 978-0-13-377392-7 (Kindle Edition)
7. Title: Python for Everybody  
Author(s): Charles R. Severance  
Publisher: CreateSpace Independent Publishing Platform  
ISBN: 978-1530051120  
eBook: Free from <https://www.py4e.com/book.php>

## 6.0 TEACHING METHODS

Students will be working on a case study. The course instructor will guide the students in their effort to develop an IS solution to the problem described in the case. The course will include an instructional component to guide students through the body of knowledge, frameworks and tools to be used in the capstone project. The course instructor will advise students through weekly consultations, during scheduled class time, on the proceedings of the capstone project.

## 7.0 EVALUATION, ASSESSMENT AND FEEDBACK

The grade for this course is composed of the marks received for each of the following components:

Evaluation Component	Percentage of the Final Grade
<b>Evaluation 90A</b>	
Weekly update	10%
Class Participation	10%
Midterm Exam	30%
Interim Report and related artifacts	50%
<b>Total</b>	<b>100%</b>
<b>Evaluation 90B</b>	
Weekly update	10%
Class Participation	10%
Individual Reflections	30%
Final Report, Presentation and related artifacts	50%
<b>Total</b>	<b>100%</b>

**NOTE:** Students must achieve a course grade of at least 50% to pass this course.

- ❖ At least **20%** of student’s grade based on individual work will be returned to students prior to the last date to drop a course in [good academic standing](#).
- ❖ This is a multi-term course with two evaluation parts “A” and “B”. The “A” portion of a multi-term course does not appear on a student's transcript. The final grade is assigned to the “B” portion of the course.
  - **To pass the course, student must achieve at least an average of 50% over all evaluation components of the course and pass the capstone project. The minimum acceptable standard for the Capstone Project Reports is 65%. Any report which falls below this standard will be returned to the student team as unsatisfactory and a date set by the professor for its resubmission. If it is not resubmitted by then to an acceptable standard, it will become a failure.**

### Citation Format for Essays and Term Papers

All essay assignments, term paper and other written works must adhere with APA citation format.

Technical errors (spelling, punctuation, proofing, grammar, format, and citations) and/or inappropriate levels of language or composition will result in marks being deducted. You are encouraged to obtain assistance from the Writing Centre ([www.ryerson.ca/writingcentre](http://www.ryerson.ca/writingcentre)) for help with your written communications as needed.

You can find APA guidelines and academic referencing from the following online resources:

[Student Learning Support > Online Resources > Writing Support Resources](#)

- [APA Basic Style Guide](#)

[Ryerson Library Citations and Style Guides](#)

- [APA Style](#)
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## **8.0 PLAGIARISM DETECTION**

**Turnitin** (if used in this course)

Turnitin.com is a plagiarism prevention and detection service to which Ryerson subscribes. It is a tool to assist instructors in determining the similarity between students' work and the work of other students who have submitted papers to the site (at any university), internet sources, and a wide range of books, journals and other publications. While it does not contain all possible sources, it gives instructors some assurance that students' work is their own. No decisions are made by the service; it generates an "originality report," which instructors must evaluate to judge if something is plagiarized.

Students agree by taking this course that their written work will be subject to submission for textual similarity review to Turnitin.com. Instructors can opt to have student's papers included in the Turnitin.com database or not. Use of the Turnitin.com service is subject to the terms-of-use agreement posted on the Turnitin.com website. Students who do not want their work submitted to this plagiarism detection service must, by the end of the second week of class, consult with their instructor to make alternate arrangements.

Even when an instructor has not indicated that a plagiarism detection service will be used, or when a student has opted out of the plagiarism detection service, if the instructor has reason to suspect that an individual piece of work has been plagiarized, the instructor is permitted to submit that work in a non-identifying way to any plagiarism detection service.

**Virtual Proctoring** (if used in this course)

Online exam(s) within this course use a virtual proctoring system. Please note that your completion of the exam will be recorded via the virtual platform and subsequently reviewed by your instructor. The virtual proctoring system provides the instructor with a recording that only includes video where possible indications of suspicious behaviour are identified. Recordings will be held for a limited period of time in order to ensure academic integrity is maintained.

Access to a computer that can support remote recording is your responsibility as a student. The computer should have the latest operating system, at a minimum Windows (10, 8, 7) or Mac (OS X

10.10 or higher) and web browser Google Chrome or Mozilla Firefox. You will need to ensure that you can complete the exam using a reliable computer with a webcam and microphone available, as well as a high-speed internet connection. Please note that you will be required to show your Ryerson OneCard prior to beginning to write the exam. In cases where you do not have a Ryerson OneCard, government issued ID is permitted.

Information will be provided prior to the exam date by your instructor who may provide an opportunity to test your set-up or provide additional information about online proctoring. Since videos of you and your environment will be recorded while writing the exam, please consider preparing the background (room / walls) so that personal details are not visible, or move to a room that you are comfortable showing on camera.

## 9.0 TOPICS – SEQUENCE & SCHEDULE

Session 90A	Topic & Learning Outcomes	Readings	Deliverable
1	<b>Course Overview</b> <ul style="list-style-type: none"> <li>• Capstone project overview</li> <li>• Team/Group Assignment</li> <li>• Capstone Project Schedule &amp; Evaluation</li> </ul>	Textbook 1: CH4-6	
2	<b>Requirement Specification &amp; Modeling</b> <ul style="list-style-type: none"> <li>• Develop a use case model of an IS solution requirements</li> </ul>	Textbook 2: CH3, 5	Weekly Update
3	<b>Process Modeling</b> <ul style="list-style-type: none"> <li>• Develop BPMN models for the use cases of an IS solution</li> <li>• Apply process improvement heuristics</li> </ul>	Textbook 3: CH3,4, 8	<ul style="list-style-type: none"> <li>• Weekly Update</li> <li>• Project Management Plan</li> </ul>
4	<b>Data Modeling &amp; Database Design</b> <ul style="list-style-type: none"> <li>• Develop data model and schema of an IS solution</li> </ul>	Textbook 4: CH3-5	Weekly Update
5	<b>Solution Design, Implementation &amp; Deployment</b> <ul style="list-style-type: none"> <li>• Develop structural and behavioral models of an IS solution</li> <li>• Identify the elements of IT infrastructure, security, and training that are required for a successful solution deployment.</li> <li>• Identify deployment risks &amp; mitigation actions</li> <li>• Assess solution alignment with business goals</li> <li>• Implement/simulate select functional behavior of an IS solution</li> </ul>	Textbook 1: CH11 Textbook 2: CH10,11,13 Textbook 5: CH6, 10 Textbook 6: CH14,15	Weekly Update
6	<b>Midterm Exam</b>		

7-11	In-Class Group Consultation <ul style="list-style-type: none"> <li>• Review group progress on the capstone project</li> <li>• Identify and address project issues</li> </ul>		Weekly Update
12	In-Class Group Consultation <ul style="list-style-type: none"> <li>• Review group progress on the capstone project</li> <li>• Identify and address project issues</li> </ul>		Interim Report

Session 90B	Topic & Learning Outcomes	Deliverable
1-9	In-Class Group Consultation <ul style="list-style-type: none"> <li>• Review group progress on the capstone project</li> <li>• Identify and address project issues</li> </ul>	Weekly Update
10	In-Class Group Consultation <ul style="list-style-type: none"> <li>• Review group progress on the capstone project</li> <li>• Identify and address project issues</li> </ul>	Individual Reflections
11	Capstone Project Presentations	Final Project Report
12	Capstone Project Presentations	

### 10.0 VARIATIONS WITHIN A COURSE

All sections of a course (Day and CE sections) will follow the same course outline and will use the same course delivery methods, methods of evaluation, and grading schemes. Any deviations will be posted on D2L Brightspace once approved by the course coordinator.

### 11.0 OTHER COURSE, DEPARTMENTAL, AND UNIVERSITY POLICIES

For more information regarding course management and departmental policies, please consult the [Course Outline Appendix](#) which is posted on the [Ted Rogers School of Information Technology Management website](#)

**NOTE:** Students must adhere to all relevant university policies found in their online course shell in D2L and /or on the following URL: [senate-course-outline-policies](#).

The appendix covers the following topics:

Attendance & Class Participation

Email Account

Request for Academic Consideration

Examinations & Tests  
Late Assignments  
Standard of Written Work  
Academic Grading Policy  
Academic Integrity  
Student Rights

### Important Resources Available at Ryerson

- [Academic Accommodation Support](#): Ryerson University acknowledges that students have diverse learning styles and a variety of academic needs. If you have a diagnosed disability that impacts your academic experience, connect with Academic Accommodation Support (AAS). Visit the [AAS website](#) or contact [aasadmin@ryerson.ca](mailto:aasadmin@ryerson.ca) for more information. Note: All communication with AAS is voluntary and confidential, and will not appear on your transcript.
- [The Library](#) provides research workshops and individual assistance. If the University is open, there is a Research Help desk on the second floor of the library, or go to [Workshops](#).
- [Student Learning Support](#) offers group-based and individual help with writing, math, study skills, and transition support, as well as [resources and checklists to support students as online learners](#).
- You can submit an [Academic Consideration Request](#) when an extenuating circumstance has occurred that has significantly impacted your ability to fulfill an academic requirement.
- [Ryerson COVID-19 Information and Updates for Students](#) summarizes the variety of resources available to students during the pandemic.
- Familiarize yourself with the tools you will need to use for remote learning. The [Continuity of Learning Guide](#) for students includes guides to completing quizzes or exams in D2L or Respondus, using D2L Brightspace, joining online meetings or lectures, and collaborating with the Google Suite.