



**CARLETON UNIVERSITY
SPROTT SCHOOL OF BUSINESS
BUSI 3402 A
WINTER 2024
Systems Analysis and Design**

Instructor: Ali Nazari

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CLASS TIME/ROOM:

Date and Time: Friday 11:35-14:25 (Note: first class on Friday, January 12, 2023; last class is April 10, 2023)

Tutorial A1: 1:35 pm - 2:25 pm, Wednesday

Tutorial A2: 9:35 am - 10:25 am, Monday

Modality: In-person Flipped Class: Two hours of synchronous, in-person lectures followed by one hour of teamwork or in-class exercises.

Pre-requisites & Precluded Courses:

one of BUSI 2400 (1401), or COMP 2404, or SYSC 2004 (with a grade of C or higher).

Precludes additional credit for SYSC 3100, BUSI 3403, (no longer offered) and BUSI 3404 (no longer offered).

Course Description

Methods of analysis of computer-based information systems. The systems development life cycle, planning, analysis, design, implementation, and maintenance. Structured and object-oriented methods will be used. Use of a CASE tool. The course introduces the concepts, skills, methodologies, techniques, and tools essential for the successful development of information systems. Through class discussions, assignments, and team projects, students will learn methodologies to realize user requirements and will understand tools that help in translating the requirements into information systems.



Learning outcomes:

1. Gain insight into various types of IT-based business needs.
2. Conduct feasibility studies, establish priorities, and initiate information system projects.
3. Define information system project challenges or opportunities.
4. Employ analytical methods, including data modeling techniques, to assess problems or opportunities.
5. Utilize case tools for both process and data modeling.
6. Communicate security and user experience principles throughout the system development process.
7. Engage in information system design encompassing design, user interface, data modeling, and information requirements.
8. Evaluate and communicate the feasibility of alternative solutions while analyzing ethical, cultural, and legal issues.

Reading(s)/Textbook(s)/Required Materials:

Required: Course lectures uploaded on Brightspace (Lecture two hours and teamwork & exercise one hour).

& Required Textbook

Dennis, A. Wixom, B. H. Roth, R. M., Systems analysis and Design, 8th Edition, 2021

Additional resources:

Joseph S Valacich & Joey F. George, Modern Systems Analysis and Design, 8/E

Lab and software

Objective and tool: Use web-based diagramming applications that support various diagram types or use system development tools, i.e., IBM's Rational® Requirements Management, Rational Software Modeler, IBM DB2, and MS SQL Server or Access, MS Visio and MS Project, to support the information systems analysis and design process. For MS Office Visio and Project management software, download from the university software site.

Course Requirements & Methods of Evaluation:**Evaluation**

- Class participation – 3 in-class exercises (10%)
- Individual assignments (3 x 10% = 30%)
 - Assignment 1: Foundations for systems development & System Planning
 - Assignment 2: System Analysis
 - Assignment 3: System Design
- Team project (25%)
 - Group Assignment - Sign off (%5)
 - Group Assignment – Presentation (%10)
 - Group Assignment – Report (&Peer review) (%10)
- Final exam (35%)- TBD

Class Participation (3 In-Class Exercises)

Effectively mastering information systems analysis and design involves bridging theoretical knowledge with practical application. Your active participation in class is crucial for success in this course. Your engagement will be assessed based on both the quantity and quality of your participation in in-class exercises. Come prepared to actively contribute, respond to class discussions, and bring forth any questions or challenges you encounter in your practical application for group discussion.

Individual assignment and submission

There will be three individual assignments, and they are expected to be submitted by the specified date and time. Please ensure that each assignment file is appropriately named using the following format: busi3402A_w24_assignment#_LastName_CUID (e.g., busi3402A_w24_assignment#1_Nazari_100123456). All assignments must be submitted through Brightspace. As plenty of time is provided for assignments, **no credit is given for posting a late assignment**. A missed assignment supported by medical documentation will result in those marks being shifted to the remaining individual assignments upon discussion with the instructor. Further instructions will be posted on the course Brightspace site.

Group Term Project and Presentation

Students will autonomously form teams, leveraging best practices for diverse and successful team analysis and system design. Each team is required to submit three assignments on Brightspace, covering the following components: Final Project Topic - Instructor Approval (5%), Final Presentation (10%), and Final Report (10%). The approval for the final project topic will be obtained through Instructor Approval – Group Assignment - Sign-off. Additionally, the final presentation will include a 5to7-minute recorded pitch via Zoom, involving contributions from all team members. Final team report will submit on Brightspace in due date dedicated in the course schedule section. Collaboratively, team members will provide peer reviews to assess each other's contributions, with individual report grades determined by the overall team assessment based on these peer reviews.

Final Exam

Final exam will be scheduled by the university. The exam paper will be made available through Brightspace. This exam will be e-proctored using CoMaS (more information on e-proctoring is provided in the following section). The students will be given 90 minutes to prepare their responses to the exam questions. Students will be allowed to refer to only a few websites or diagramming applications mentioned in the exam paper. No other web sources, websites, apps, or access to other digital devices are allowed. The students have to upload their final responses to exam questions within the 90-minute time frame on Brightspace. PMC accommodations apply for the fourth networking assignment.

INFORMATION ON E-PROCTORING AND CoMaS:

Please note that tests and examinations in this course will use a remote proctoring and CoMaS service provided by Scheduling and Examination Services. You can find more information at <https://carleton.ca/ses/e-proctoring/>.

- The minimum computing requirements for this service are as follows:
- Hardware: Desktop, or Laptop
- OS: Windows 10, Mac OS 10.14, Linux Ubuntu 18.04
- Internet Browser: Google Chrome, Mozilla Firefox, Apple Safari, or Microsoft Edge
- Internet Connection (High-Speed Internet Connection Recommended)
- Webcam (HD resolution recommended)

Note: Tablets, Chromebooks and Smartphones are not supported at this time. Windows-based tablets are not supported at this time.

CONDUCT

Professional conduct is built upon the idea of mutual respect. Such conduct entails (but is not necessarily limited to):

- *Attending the class.* Each class benefits from the attendance and participation of all students. Your understanding of the class content and ability to contribute will be affected by absences. Regular class attendance is important and required. It is expected of you to attend class and contribute to a quality discussion. Class and team discussion of the materials (e.g., readings, assignments, and cases) are an important part of the learning process. If circumstances prevent attendance at a class meeting, please remember that you are responsible for all materials discussed, handouts distributed, assignments covered, and announcements made.
- *Arriving on time.* Late arrivals are disruptive to both lectures and class discussions, and show disrespect to those who are on time.
- *Assignments.* All assignments must include student name, number, group number, and signed declaration of academic integrity on the submitted report to receive a grade.
- *Team based projects.* Teams for group project are created in class during week one and two of the course. Students arriving after should notify the course instructor and find a team. Teams are student selected and will follow their own norms of conduct.
- *Attending team meetings.* Missing more than 2 team meetings without a certified reason may result in team members being requested to leave a team. Assessment of the team assignment will then be reviewed and agreed upon with the instructor.
- *Course feedback:* Assignment feedback is available via Brightspace and during office hours. Rewrites of assignments or exams will not be provided.
- *Minimizing disruptions.* You should not leave and re-enter the class. Please minimize background noise during class.
- *Focusing on the class.* You should avoid engaging in side conversations during class.
- *Being prepared for class.* You should be ready to discuss any assigned readings and course content. Also, be prepared to answer any assigned questions for each day's class, including being ready to open a case assigned for that day.
- *Cellular phones.* The use of cellular phones IS NOT PERMITTED in this class. It is disruptive to the instructor and class members. If an emergency situation requires you to keep your cell phone turned on you may wish to keep the silent mode on, please discuss this with the instructor prior to the class starting.
- *Deferred term work.* Will be replaced with term work and the weight not shifted to the exam. Formative work will be replaced with formative work, and is to be completed prior to the end of the semester.
- *Email.* Due to the class size of this course, it may take 48hrs to reply to emails. All emails addressed to the instructor must begin with the title BUSI 3402- and include the student's name, CUID, and group number in the email.
- *Grading.* Saying you thought the rubric was vague or ambiguous will not be considered a sufficient rationale to review an assignment grade. All assignments are provided on the first day of related class with the option to discuss ahead of submission via email, office hours or in-class questions.
- *Grades and feedback* may be delayed due to the availability of TA's, sickness, Sprott responsibilities or family matters. You have options to connect with the instructor prior to assignments via email, office hours (third hour) and in class questions.
- *Grades.* The grades for the peer review will not be released as they are designed to cover the complete course content.

Important Dates and Deadlines

Winter 2024: [The Academic Year \(Graduate and Undergraduate Studies\) < Carleton University](#)

Course Schedule

Week / Date	Topic	Assignments
W1- Jan. 12	11:30 – 13:30: Introduction and course overview, Review course outline; Assignments (1, 2 and 3) and Group Project assignment. Planning- 1: Project Initiation	13:30 – 14:25: Create teams to work on project and brainstorming.
W2- Jan. 19	11:30 – 13:30: Planning- 2: Project Management	13:30 – 14:25: Teamwork, team forming, idea, ...
W3- Jan. 26	11:30 – 13:30: Analysis- 3: Requirements Determination	Finalize project teams and forward names to the instructor by email. 13:30 – 14:25: In-Class Exercise #1
W4- Feb. 2	11:30 – 13:30: Analysis- 4: Use Case Analysis & Process Modeling	Assignment 1: Foundations for systems development & System Planning - Due Date by Feb. 1st 13:30 – 14:25: Teamwork
W5- Feb. 9	11:30 – 13:30: Analysis- 5: Data Modeling & 6: Moving into Design	Group Assignment - Sign off - Due Date by Feb. 8th 13:30 – 14:25: In-Class Exercise #2
W6. Feb. 16	11:30 – 13:30: Design- 7 Architecture Design & 8: User Interface Design	Assignment 2: System Analysis - Due Date by Feb. 15th 13:30 – 14:25: Teamwork
Feb. 23	Winter reading break, no class	---
W7. March 1	11:30 – 13:30: Design- 8: User Interface Design (cont.) & 9: Program Design	13:30 – 14:25: Teamwork
W8. March 8	11:30 – 13:30: Design- 10: Data Storage Design & 11: Moving into Implementation	13:30 – 14:25: In-Class Exercise #3
W9. March 15	11:30 – 13:30: Implementation- 12: Transition to the New System	Assignment 3: System Design- Due Date by March 14th 13:30 – 14:25: Teamwork
W10. March 22	11:30 – 13:30: Agile Development Methods	13:30 – 14:25: Teamwork
March 29	Statutory holiday. University closed.	
W11. April 5	11:30 – 14:30: Overview of the classes, the team report and presentation, and the final exam.	Group Assignment – Presentation- Due Date by April 4th
W12. April 10	11:30 – 14:30: a make-up class for March 29th Presentation & report & peer review	Group Assignment – Presentation- Due Date by April 9th Group Assignment – Report (&Peer review)- Due Date by April 12th

Contribution to Learning Goals of the Program (BCom, BIB):

Program Learning Goal	Competencies Not Covered	Competencies Introduced (only)	Competencies Taught But Not Assessed	Competencies Taught and Assessed
CHECK (X) ONE PER ROW				
BC1 Knowledge <i>Graduates will be skilled in applying foundational business knowledge to appropriate business contexts.</i>				x
BC2 Collaboration <i>Graduates will be collaborative and effective contributors in team environments that respect the experience, expertise and interest of all members.</i>				x
BC3 Critical Thinking <i>Graduates will be discerning critical thinkers, able to discuss different viewpoints, challenge biases and assumptions, and draw conclusions based on analysis and evaluation.</i>			x	
BC4 Communication <i>Graduates will be effective and persuasive in their communications.</i>				x
BI5 Global Awareness (BIB ONLY) <i>Graduates will be globally-minded.</i>				

ADDITIONAL INFORMATION

Course Sharing Websites

Materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

Required calculator in BUSI course examinations

If you are purchasing a calculator, we recommend any one of the following options: Texas Instruments BA II Plus (including Pro Model), Hewlett Packard HP 12C (including Platinum model), Staples Financial Calculator, Sharp EL-738C & Hewlett Packard HP 10bII

Group work

The Sprott School of Business encourages group assignments in the school for several reasons. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, follower-ship and other group skills. Group assignments are also good for learning integrative skills for putting together a complex task. Your professor may assign one or more group tasks/assignments/projects in this course. Before embarking on a specific problem as a group, it is your responsibility to ensure that the problem is meant to be a group assignment and not an individual one.

In accordance with the Carleton University Undergraduate Calendar (p 34), the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D+ = 57-59
A = 85-89	B = 73-76	C = 63-66	D = 53-56
A - = 80-84	B - = 70-72	C - = 60-62	D - = 50-52
F = Below 50			

Grades entered by Registrar:

WDN = Withdrawn from the course

DEF = Deferred

Academic Regulations

University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website, here:

<http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/>

Requests for Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy Accommodation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting

accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. carleton.ca/pmc

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and its survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: carleton.ca/sexual-violence-support

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline

Academic Integrity

Violations of academic integrity are a serious academic offence. Violations of academic integrity – presenting another's ideas, arguments, words or images as your own, using unauthorized material, misrepresentation, fabricating or misrepresenting research data, unauthorized co-operation or collaboration or completing work for another student – weaken the quality of the degree and will not be tolerated.

Process: If an alleged violation occurs, all relevant documentation will be forwarded to the Dean. If the allegation proves true, the penalties may include; a grade of Failure on the submitted work and/or course; academic probation; a refusal of permission to continue or to register in a specific degree program; suspension from full-time studies; suspension from all studies at Carleton; expulsion from Carleton, amongst others. **For a first offence, at a minimum, the penalty assigned will normally be a zero on the submitted work and at least a minimum full grade reduction of the final course grade. For a second offence, at a minimum, the penalty assigned will normally lead to a suspension from studies.**

Students are expected to familiarize themselves with and follow the Carleton University Student Academic Integrity Policy which is available, along with resources for compliance at: <http://carleton.ca/registrar/academic-integrity/>.

Sprott Student Services

The Sprott Undergraduate Student Services Office offers program advising and overall student success support. Our team is available to discuss your academic goals and your program progression plans. We can also work with you to develop strategies for success, including study skills for Business. If you experience any difficulty this term or if you would like to access support, please contact our team at bcom@sprott.carleton.ca or at bib@sprott.carleton.ca.

Centre for Student Academic Support

The Centre for Student Academic Support (CSAS) is a centralized collection of learning support services designed to help students achieve their goals and improve their learning both inside and outside the

classroom. CSAS offers academic assistance with course content, academic writing and skills development. Visit CSAS on the 4th floor of MacOdrum Library or online at: carleton.ca/csas.

Important Information:

- Students must always retain a copy of all work that is submitted.
 - All final grades are subject to the Dean's approval.
 - For us to respond to your emails, we need to see your full name, CU ID, and the email must be written from your valid CARLETON address. Therefore, in order to respond to your inquiries, please send all email from your Carleton CMail account. If you do not have or have yet to activate this account, you may wish to do so by visiting <https://carleton.ca/its/get-started/new-students-2/>
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