



Carleton
University

Sprott
School of Business

CARLETON UNIVERSITY
SPROTT SCHOOL OF BUSINESS
BUSI 3402 /A
WINTER 2023
SYSTEMS ANALYSIS AND DESIGN

Instructor: Samira Farivar
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Modality: *In Person

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 Calendar description from the [2022/2023 University calendar](#):

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.

Course Description:

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. Understand the importance of systems analysis and the role of system and business analysts.
2. Understand the types of IT-based business needs.
3. Feasibility study of the project, setting priorities, and launching information system projects.
4. Prepare a business requirements document based on the requirements framework and transfer it to the technical specifications required to set up the information system.
5. Understand different phases of system development lifecycle (SDLC).
6. Requirement analysis using structured and object-oriented approach.
7. Information system design including architecture, user interface and data design.
8. Managing system support and security.
9. Agile development methods.

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

Required: Course lectures uploaded on Brightspace

Main Textbooks:

- Dennis, A. Wixom, B. H. Roth, R. M., *Systems analysis and Design*, 8th Edition, 2022

Other Recommended Textbooks:

- Scott Tilley, *Systems Analysis and Design*, 12th Edition, 2019
- Joseph S Valacich, Joey F. George *Modern Systems Analysis and Design* (2020, 9th Edition)

Lab and software

Use of CASE tools and drawing packages, such as Rational Rose, Visual Analyst, MS Visio, or Lucid Chart.

Course Requirements & Methods of Evaluation (including due dates):

Deliverables	Due Date	Weight
Individual Assignments <ul style="list-style-type: none"> • Assignment 1-System planning • Assignment 2- System Analysis (Process Modeling) • Assignment 3- System Analysis (Data Modeling and OO) • Assignment 4-System Design 	<ul style="list-style-type: none"> • Jan. 27th, 5:00 pm • Feb. 10th, 5:00 pm • Feb. 27th, 5:00 pm • March 24th, 5:00 pm 	20% (Each assignment 5%)

Group Project Presentation		15%
Group Project Report	April 12th, 11:59 pm	20%
Final Exam	TBD	30%
Class participation		15%
Total		100%

Class participation

The key in learning information systems analysis and design is to link classroom knowledge to practical application. Active participation in the classroom is very important in this course. You will be measured by your involvement in the in-class exercises (quantity and quality of your participation). Be prepared to respond to issues raised in class.

Assignment and submission

There will be four assignments. Individual assignments are due at the date and time indicated. Each assignment's file should be named properly and in the following format: BUSI3402A_assignment#_ your Initials _CUID (e.g., BUSI3402A_assignment#1_SF_00000000).

Assignments must be submitted through Brightspace.

Group Term Project Report and Presentation

At the beginning of the term, students will form a group of (max.) 5 for a term project. Bi-weekly project status report is expected of the teams. A final project report is due at the end of the term. Each team will be given 10-15 minutes to engage classmates about their projects. Presentations will be held in the last two weeks of the course. Writing report of the project (PDF or Word file) should be submitted by the specified due date. The submission file should be named in the following format: BUSI3402A_Project_Group_number. (Group numbers will be available on Brightspace).

At the end of the term, each student will be asked to complete a peer-review form for self and other team members. A numerical grade (out of 100) will be assigned to the team's term project. Each team member's term project grade will be determined by the grade for the team and team member's peer reviews and evaluations.

Examination

Final examination will be scheduled by the university and to be held in April 2022.

Course Schedule:

Lecture	Date	Topic
1	Jan 13	Introduction to Systems Analysis and Design Ch. 1 The Systems Analyst and Information Systems Development
2	Jan 20	Part 1- Planning Phase Ch. 2 Project Selection and Management
3	Jan 27	Part 2- Analysis Phase Ch. 3 Requirements Determination- Use Case Analysis

4	Feb 3	Part 2- Analysis Phase Ch. 4 Process Modeling
5	Feb 10	Part 2- Analysis Phase Ch. 5 Data Modeling
6	Feb 17	Part 2- Analysis Phase Object-Oriented Modeling (Ch. 6 in Tilly book)
	Feb 20-24	Winter Break
7	March 3	Part 3- Design Phase Ch. 6 Moving into Design Ch. 7 Architecture Design
8	March 10	Part 3- Design Phase Ch 8 User Interface Design
9	March 17	Part 3- Design Phase Ch. 9 Program Design Ch. 10 Data Storage Design
10	March 24	Part 4. Implementation Phase Ch. 11 Moving into Implementation Ch. 12 Transition to the New System
11	March 31	Part 4. Implementation Phase Ch. 13 Agile Development Methods
	April 7	Good Friday-No Class
12	April 12	Groups Presentations

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				X

<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>				
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 Spratt 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.

Grading

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: <https://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/>

Covid-19 Information:

It is important to remember that COVID is still present in Ottawa. The situation can change at any time and the risks of new variants and outbreaks are very real. There are [a number of actions you can take](#) to lower your risk and the risk you pose to those around you including being vaccinated, wearing a mask, staying home when you're sick, washing your hands and maintaining proper respiratory and cough etiquette.

Feeling sick? Remaining vigilant and not attending work or school when sick or with symptoms is critically important. If you feel ill or exhibit COVID-19 symptoms do not come to class or campus. If you feel ill or exhibit symptoms while on campus or in class, please leave campus immediately. In all situations, you must follow Carleton's [symptom reporting protocols](#).

Masks: Carleton has paused the [COVID-19 Mask Policy](#), but continues to strongly recommend masking when indoors, particularly if physical distancing cannot be maintained. It may become necessary to quickly reinstate the mask requirement if pandemic circumstances were to change.

Vaccines: Further, while proof of vaccination is no longer required as of May 1 to attend campus or in-person activity, it may become necessary for the University to bring back proof of vaccination requirements on short notice if the situation and public health advice changes. Students are strongly encouraged to get a full course of vaccination, including booster doses as soon as they are eligible, and submit their booster dose information in [cuScreen](#) as soon as possible. Please note that Carleton cannot guarantee that it will be able to offer virtual or hybrid learning options for those who are unable to attend the campus.

All members of the Carleton community are required to follow requirements and guidelines regarding health and safety which may change from time to time. For the most recent information about Carleton's COVID-19 response and health and safety requirements please see the [University's COVID-19 website](#) and review the [Frequently Asked Questions \(FAQs\)](#). Should you have additional questions after reviewing, please contact covidinfo@carleton.ca.