Commerce 3KA3-CO1
Systems Analysis and Design
Fall 2024 Course Outline

Information Systems Area
DeGroote School of Business
McMaster University

INSTRUCTOR AND CONTACT INFORMATION

Dr. Ali Reza Montazemi	**Mupwaya Mutakwa**
Instructor	Teaching Assistant
montazem@mcmaster.ca	mutakwam@mcmaster.ca
Office: DSB 421	
Office Hours: by appointment	Office Hours: by appointment

Course website: All communication will be through course Avenue

COURSE ELEMENTS

Credit Value:	3	Leadership:	Yes	IT skills:	Yes	Global view:	Yes
A2L:	Yes	Ethics:	No	Numeracy:	Yes	Written skills:	Yes
Participation:	Yes	Innovation:	Yes	Group work:	Yes	Oral skills:	Yes
Evidence-based:	Yes	Experiential:	Yes	Final Exam:	Yes	Guest speaker(s):	Yes

COURSE INFORMATION

Class Meeting Time and Location		
Section	**Day/time** *(Eastern Time)*	Location
1 - C01	Wednesday (11:30am-2:20pm)	[redacted]
All communication will be through course Avenue		

Students corresponding via email must send messages that originate from their official McMaster University email account. This protects the confidentiality and sensitivity of information, as well as confirms the identity of the student.

IMPORTANT LINKS

- Mosaic
- Avenue to Learn
- Student Accessibility Services - Accommodations
- McMaster University Library

COURSE LEARNING OUTCOMES

The course provides basic understanding and practical skills of systems analysis and design. It will help students to work in information systems related fields in the future. The course will cover the following topics:

- The need for systems analysis and the role of systems analysts.
- Approaches for the development of information systems.
- Methods for gathering requirements to develop an information system.
- Approaches for analyzing systems requirements using traditional and new approaches.
- Designing Interface including effective output and input.
- Designing Databases.
- Designing human-computer interaction and data entry procedures.
- Quality assurance and implementation.

COURSE LEARNING GOALS

This course aims to develop a holistic understanding of how information systems are being built. Starting from identifying the need for an information system to the maintenance of the system. In this course, different approaches (e.g., agile approach) to analyze systems requirements, and how to design a system and its databases will be discussed. Students will also learn about low-code platforms that can be used to develop such information systems. Students will learn through synchronous lectures, online and offline discussions, hands-on

assignments, and a term project. Through the course students will learn how to translate business requirements into information systems that support a company's short- and long-term objectives.

REQUIRED MATERIALS AND TEXTS

These items are an integral part of the lesson plan for the course, and not having these materials could have a negative impact on a student's learning outcomes for the course.

Required: Kendall & Kendall, Systems Analysis and Design, 10th Edition, 2019

Textbook Listing: https://textbooks.mcmaster.ca

CLASS FORMAT

This is an in-person 3-hour course. The three hours will consist of mini-lecture, lengthier discussion, and more in-depth discussion of the topics related to the lecture. There will be a short break part way through at a convenient time based on what we are working on. Please use this time to take care of personal needs of various kinds.

COURSE EVALUATION

Learning in this course results primarily from reading materials, assignments, a term project, a midterm exam, and a final exam.

Assignments

The assignments are designed for students to gain hands-on experience of the systems analysis and design techniques. Students should work on these assignments individually.

Final Exam

The final exam is used to test students' understanding of the system analysis and design concepts. Final exam covers the all the materials covered during the term. It is a closed book exam and will be individually evaluated. **The final exam will be in-person.**

Term Project

Students are required to do a project of requirement analysis for an e-business initiative. Students are expected to work in a group of 5-6 members. The objective of the student project is to do requirement analysis and design for an e-business initiative.

Participation

Participation of the course will take place synchronously. 10 marks are an evaluation of your participation in this portion. 10 marks will be accredited to the in-class participation

In-class participation marks are based on the *quality* as well as the quantity of participation (with a greater emphasis on quality). Marks are NOT awarded for attendance only. Contributions are evaluated based on a three-point scale: 1) physically but not actively engaged; 2) some contribution; and 3) good contribution. Debate and challenge are important activities that help in the learning process, and the willingness of individuals to engage in such activities with their classmates is critical.

Name cards and class pictures are used to help give credit for your participation. You must have a name card, with your full first and last name clearly written and displayed for every class.

Opportunities for participation include:

Asking questions; responding to questions posed by the instructor or other students; making relevant comments; and reflecting on the discussion that has occurred. Just raise your hand and wait for the instructor to acknowledge you before speaking. The instructor will strive to give all students equal contribution chances, but you must show interest in participating by raising your hand.

Components and Weights

Assignments		32%
Assignment 1 – Mendix (Become a Rapid Developer)	14%	
Assignment 2 – Data Flow Diagram	7%	
Assignment 3 – Interface Design	4%	
Assignment 4 – Database Design	7%	
Final		30%

Project		28%
Proposal	3%	
Presentation	10%	
Report	15%	
In Class - Participation		10%
Total		100%

LATE ASSIGNMENTS

All assignments must be handed in electronically through the course website by the deadline date and time specified for each component. **The penalty for overdue assignments is 20% of the total assignment mark per day.**

COMMUNICATION AND FEEDBACK

Students who wish to correspond with instructors or TAs directly via email must send messages that originate from their official McMaster University email account. This protects the confidentiality and sensitivity of information as well as confirms the identity of the student. Emails regarding course issues should NOT be sent to the Area Administrative Assistants. All students must receive feedback regarding their progress prior to the final date by which a student may cancel the course without failure by default.

- *For Level 1 and Level 2 courses, this feedback must equal a minimum of 20% of the final grade.*
- *For Level 3 courses and above, this feedback must equal a minimum of 10% of the final grade.*

Instructors may solicit feedback via an informal course review with students by Week #4 to allow time for modifications in curriculum delivery.

Students who have concerns about the course content, evaluation methods, or delivery should first reach out to the course instructor. If your concern remains unresolved after speaking with the instructor, you may then reach out to the relevant Area Chair for further consideration.

REQUESTING RELIEF FOR MISSED ACADEMIC WORK

In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar "Requests for Relief for Missed Academic Term Work" and the link below*;

http://ug.degroote.mcmaster.ca/forms-and-resources/missed-course-work-policy/

* Non-Commerce students must follow the Missed Course Work protocols outlined by their home faculty and Program Office.

COURSE MODIFICATION

From time to time there may be a need to remove/add topics or to change the schedule or the delivery format. If these are necessary, you will be given as much advance notice as possible.

GENERATIVE AI

There are three approved statements on the use of AI in the classroom. Please choose the one that best fits your policy

USE PROHIBITED

Students are not permitted to use generative AI in this course. In alignment with McMaster academic integrity policy, it "shall be an offence knowingly to … submit academic work for assessment that was purchased or acquired from another source". This includes work created by generative AI tools. Also state in the policy is the following, "Contract Cheating is the act of "outsourcing of student work to third parties" (Lancaster & Clarke, 2016, p. 639) with or without payment." Using Generative AI tools is a form of contract cheating. Charges of academic dishonesty will be brought forward to the Office of Academic Integrity.

SOME USE PERMITTED

Example One

Students may use generative AI in this course in accordance with the guidelines outlined for each assessment, and so long as the use of generative AI is referenced and cited following citation instructions given in the syllabus. Use of generative AI outside assessment guidelines or without citation will constitute academic dishonesty. It is the student's responsibility to be clear on the limitations for use for each assessment and to be clear on the expectations for citation and reference and to do so appropriately.

Example Two

Students may use generative AI for [editing/translating/outlining/brainstorming/revising/etc] their work throughout the course so long as the use of generative AI is referenced and cited following citation instructions given in the syllabus. Use of generative AI outside the stated use of [editing/translating/outlining/brainstorming/revising/etc] without citation will constitute academic dishonesty. It is the student's responsibility to be clear on the limitations for use and to be clear on the expectations for citation and reference and to do so appropriately.

Example Three

Students may freely use generative AI in this course so long as the use of generative AI is referenced and cited following citation instructions given in the syllabus. Use of generative AI outside assessment guidelines or without citation will constitute academic dishonesty. It is the student's responsibility to be clear on the expectations for citation and reference and to do so appropriately.

UNRESTRICTED USE

Students may use generative AI throughout this course in whatever way enhances their learning; no special documentation or citation is required.

ACADEMIC INTEGRITY

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. **It is your responsibility to understand what constitutes academic dishonesty.**

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy.

The following illustrates only three forms of academic dishonesty:

- plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.
- improper collaboration in group work.
- copying or using unauthorized aids in tests and examinations.

AUTHENTICITY/PLAGIARISM DETECTION

Some courses may use a web-based service (Turnitin.com) to reveal authenticity and ownership of student submitted work. For courses using such software, students will be expected to submit their work electronically either directly to Turnitin.com or via an online learning platform (e.g. Avenue to Learn, etc.) using plagiarism detection (a service supported by Turnitin.com) so it can be checked for academic dishonesty.

Students who do not wish their work to be submitted through the plagiarism detection software must inform the Instructor before the assignment is due. No penalty will be assigned to a student who does not submit work to the plagiarism detection software. **All submitted work is subject to normal verification that standards of academic integrity have been upheld** (e.g., on-line search, other software, etc.). For more details about McMaster's use of Turnitin.com please go to www.mcmaster.ca/academicintegrity.

COURSES WITH AN ON-LINE ELEMENT

Some courses may use on-line elements (e.g. e-mail, Avenue to Learn, LearnLink, web pages, capa, Moodle, ThinkingCap, etc.). Students should be aware that, when they access the electronic components of a course using these elements, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in a course that uses on-line elements will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

ONLINE PROCTORING

Some courses may use online proctoring software for tests and exams. This software may require students to turn on their video camera, present identification, monitor and record their computer activities, and/or lock/restrict their browser or other applications/software during tests or exams. This software may be required to be installed before the test/exam begins.

CONDUCT EXPECTATIONS

As a McMaster student, you have the right to experience, and the responsibility to demonstrate, respectful and dignified interactions within all of our living, learning and working communities. These expectations are described in the Code of Student Rights & Responsibilities (the "Code"). All students share the responsibility of maintaining a positive environment for the academic and personal growth of all McMaster community members, **whether in person or online.**

It is essential that students be mindful of their interactions online, as the Code remains in effect in virtual learning environments. The Code applies to any interactions that adversely affect, disrupt, or interfere with reasonable participation in University activities. Student disruptions or behaviours that interfere with university functions on online platforms (e.g. use of Avenue 2 Learn, WebEx or Zoom for delivery), will be taken very seriously and will be investigated. Outcomes may include restriction or removal of the involved students' access to these platforms.

ACADEMIC ACCOMMODATION OF STUDENTS WITH DISABILITIES

Students with disabilities who require academic accommodation must contact Student Accessibility Services (SAS) at 905-525-9140 ext. 28652 or sas@mcmaster.ca to make arrangements with a Program Coordinator. For further information, consult McMaster University's Academic Accommodation of Students with Disabilities policy.

ACADEMIC ACCOMMODATION FOR RELIGIOUS, INDIGENOUS OR SPIRITUAL OBSERVANCES (RISO)

Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the RISO policy. Students should submit their request to their Faculty Office ***normally within 10 working days*** of the beginning of term in which they anticipate a need for accommodation or to the Registrar's Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

COPYRIGHT AND RECORDING

Students are advised that lectures, demonstrations, performances, and any other course material provided by an instructor include copyright protected works. The Copyright Act and copyright law protect every original literary, dramatic, musical and artistic work, **including lectures** by University instructors.

The recording of lectures, tutorials, or other methods of instruction may occur during a course. Recording may be done by either the instructor for the purpose of authorized distribution, or by a student for the purpose of personal study. Students should be aware that their voice and/or image may be recorded by others during the class. Please speak with the instructor if this is a concern for you.

EXTREME CIRCUMSTANCES

The University reserves the right to change the dates and deadlines for any or all courses in extreme circumstances (e.g., severe weather, labour disruptions, etc.). Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, Avenue to Learn and/or McMaster email.

ACKNOWLEDGEMENT OF COURSE POLICIES

Your enrolment in Commerce 3KA3 will be considered to be an implicit acknowledgement of the course policies outlined above, or of any other that may be announced during lecture and/or on A2L. **It is your responsibility to read this course outline, to familiarize yourself with the course policies and to act accordingly.**

Lack of awareness of the course policies **cannot be invoked** at any point during this course for failure to meet them. It is your responsibility to ask for clarification on any policies that you do not understand

COURSE SCHEDULE

Commerce 3KA3-CO1
Systems Analysis and Design
Fall 2024 Course Schedule

Week	Date	Lecture Topic	Assignment/ Term Project Presentation
1	Sep. 04	Overview of Course Outline and Expectations Introduction to Systems Analysis and Design (Ch 1)	
2	Sep. 11	Understanding and modeling org (Ch 2) Project management (Ch 3)	**Assignment #1** **Release: Sep. 11 – 9:00 AM** **Due: Nov. 29 – 11:59 PM**
3	Sep. 18	Information gathering (Ch 4&5)	Finalize Team (5-6 students in each team) **Mendix Guest Speaker**
4	Sep. 25	Agile modeling (Ch 6)	**Project Proposal** **Release: Sep. 25 – 9:00 AM** **Due: Oct. 2 – 11:59 PM**
5	Oct. 02	Data flow diagram (Ch 7)	**Assignment #2** **Release: Oct. 02 – 9:00 AM** **Due: Oct. 23 – 11:59 PM**
6	Oct. 9	Data dictionaries (Ch 8)	
7	**Oct. 14-18 NO CLASSES – MIDTERM RECESS**		

8	Oct. 23	Process specifications (Ch 9)	
9	Oct. 30	Object oriented systems & UML (Ch10) Designing effective output & input (Ch 11&12)	**Assignment #3** **Release: Oct. 30 – 9:00 AM** **Due: Nov. 6 – 11:59 PM**
10	Nov. 06	Designing databases (Ch 13) Human-Computer interaction (Ch 14)	**Assignment #4** **Release: Nov. 6 – 9:00 AM** **Due: Nov. 20 – 11:59 PM**
11	Nov. 13	Project Presentation	**Project Report** **Due: Nov. 13 – 9:00 AM**
12	Nov. 20	Project Presentation	
13	Nov. 27	Project Presentation (Last Day of Classes)	**Assignment #1** **Due: Nov. 29 – 11:59 PM**