Syllabus for *Introduction to Systems Analysis and Design*

CIS 641 - Section 2 — Fall 2023

Models and techniques for the major phases of software development, with emphasis on requirements specification, design, testing, and software maintenance. Description of the roles of project management, quality assurance, and configuration management.

Contact Information:

Class Time: MW, 4:00pm - 5:15pm

Instructor: Dr. Erik Fredericks

E-mail: frederer@gvsu.edu

Office: D-2-210 MAK

Office Hours: MWF, 11:00am-12:00pm, in-person or by appointment.

Course Page: https://gvsu-cis641.github.io/gvsu-cis641, Blackboard

Discord: https://discord.gg/pNaTDKH

Midterm exam: 10/11/2023, 4:00pm-5:15pm

Final exam: 12/13/2023, 4:00pm-5:50pm

Course Objectives:

This course is intended to be a managerial level viewpoint of the entire systems development life cycle. As such, its primary objective is to introduce/expose the students to the various lifecycle approaches existing in industry and to the fundamental workproducts of each phase of the typical, or generic lifecycle. The goal of this course is to prepare the student for a leadership role in systems development. Upon completion of this course, the students should have a fundamental understanding of how to:

- Analyze the business needs that drive the need for IS solutions
- Compare and contrast stakeholder roles in IS development
- Explain a typical IS project lifecycle
- Evaluate and choose appropriate system development lifecycles and methodologies
- Evaluate and choose appropriate systems acquisition alternatives
- Illustrate quality assurance and security concerns faced in all phases of systems development
- Analyze a business process and create a high-level design specification
- Analyze and articulate ethical, cultural, and legal issues associated with systems development.

- Admission to CIS program or permission of instructor

Course Materials:

Required: Systems Analysis and Design: An Object-Oriented Approach with UML, 6th ed. Dennis, Wixom, Tegarden **ISBN-13**: 978-1-119-55991-7

Note: To save costs, I signed up for the GVSU SAVE program with the GVSU Bookstore. This means that you are auto-charged for the book, however it is (in theory) offered at a significant cost savings. You are allowed to opt-out if you wish to purchase the book yourself from another location, however you need to manually opt out.

- The deadline to opt-out is **Friday, September 8th**.

- To opt-out, visit this page: https://lakerstore.gvsu.edu/GVSUSAVE and follow the instructions.

*Course Delivery - **In Person***:

This course will be delivered **in person**. If it becomes necessary to change delivery formats, we will change to an *online synchronous* format.

Grading Proportions:

The last day to drop a course with a grade of "**W**" is **November 10, 2023**.

The CR/NC date is **September 22, 2023**.

Your grade is based on your performance in your homework assignments, term project, exams, participation.

Graded Item	Weight
Participation:	10%
Coursework:	30%
Term project:	30%
Midterm Exam:	15%
Final Exam:	15%
Total	**100%**

A	>=93%	**B-**	>=80%	**D+**	>=67%
A-	>=90%	**C+**	>=77%	**D**	>=60%
B+	>=87%	**C**	>=73%	**F**	<60%
B	>=83%	**C-**	>=70%		

Late Policy:

- Work submitted after the due date will incur 10% late penalty per day, with a minimum penalty of 10%. **No assignment will be accepted more than 3 days late**.

- In-class assignments are not accepted late regardless.

- No assignment will be accepted late after the last day of class regardless of the number of days late.

If you are struggling with meeting deadlines, please contact me as soon as possible!

Coursework:

Coursework in this class consists of in-class assignments (participation), homework assignments, and a semester-long term project. Assignments are graded for correctness *and* communication. Pay attention to factors including content, organization, clarity/style, and mechanics.

1. Homework assignments must be completed individually (unless otherwise noted). However, it is expected that several of the finished and graded homework assignments will be used to support the creation of the term project report.

2. The term project is a semester-long effort *centered around software engineering and its processes*. Grades will reflect the quality of the software created as well as the adherence to software engineering processes and procedures. Individual contributions to the project will be considered as part of the grading process as well. Groups of **1–4** people will be accepted, where requests for groups of a larger size will be handled on a case-by-case basis. It is recommended to be in a group, but as you are masters students I would accept a group of 1 member.

Course Policies and General Information:

(1) The Fred Meijer Center for Writing, with locations at the Allendale and Pew/Downtown Grand Rapids campuses, is available to assist you with writing for any of your classes. Writing consultants, who are fellow GVSU students, are trained to help you with all stages of your writing process, from brainstorming to organizing to editing your papers. Simply bring a draft of your paper, the assignment sheet, and your questions/concerns to any of the Center's locations. Also, through your Gmail account, you have access to online consultations through Google Docs. The Center's services are free and you can drop in and work with a consultant or make an appointment, either through our website or by calling the Center (331-2922). For more information about our services and locations, please visit our website: `http://www.gvsu.edu/wc/`

(2) **Cooperation and cheating**: Be aware of the SCIS policy on academic honesty. Visit the department website (`https://www.gvsu.edu/computing/academic-honesty-30.htm`) for the full statement on academic honesty. Academic dishonesty will not be tolerated. Violations will result in *at least* failure of the assignment. However, violations may also include failure of the entire course and referral to the university resulting in additional consequences, including possible expulsion. You are welcome to discuss assignments with each other or myself, however do not copy answers or plagiarize. If you are

unsure of what plagiarism means, please either ask me or visit the department website mentioned above.

(3) Participation is *not* equivalent to attendance. Please ensure you keep up with the in-class assignments to ensure that you are staying current with the class (and receive the credit for it).

(4) **ChatGPT/LLM statement**: I do not mind if you use ChatGPT to help you work through problems, however do not simply copy and paste its output into your assignment. This is the same as plagiarism/cheating as you are presenting work that is **not your own**.

(5) Special Needs: If there is any student in this class who has special needs because of a disability, please contact Disability Support Resources at `http://www.gvsu.edu/dsr/` (DSR) at 616-331-2490.

(6) This course is subject to the GVSU policies listed at `http://www.gvsu.edu/coursepolicies/`.

(7) In Case of Emergency Fire: Immediately proceed to the nearest exit during a fire alarm. Do not use elevators. More information is available on the University's Emergency website located at `http://www.gvsu.edu/emergency`.

(8) This syllabus is deprecated in favor of any syllabus uploaded to the course Blackboard page with a *more recent* "generated" date. This version of the syllabus was generated on August 15, 2023.

Course Schedule:

A course schedule of topics project deadlines are included in the table below. This schedule may be adjusted throughout the semester as needed. Note, the order topics are covered is tentative and may be adjusted throughout the semester (most will take more than 1 session).

Module	Lecture/Discussion Topic
September 3th–4th, 2023, **Labor Day Recess**	No classes!
October 22nd–24th, 2023, **Fall break**	No classes!
November 22nd–26th, 2023, **Thanksgiving break**	No classes!
1	Introduction, Ethics
2	More Software Engineering
3	Functional / Structural / Behavioral Modeling
4	Design
5	Human-Computer Interaction
6	Deployment Management
7	Search-Based Software Engineering
Final Exam	Wednesday, December 13, 4:00 pm - 5:50 pm