#### UNIVERSITY OF AKRON **COLLEGE OF ENGINEERING & POLYMER SCIENCE** SYSTEMS ANALYSIS & DESIGN (CISS 241)

COMPUTER **INFORMATION SYSTEMS** 

**FALL 2023** 

#### COURSE INFORMATION

LOCATIONS/ TIMES:

Course #: CISS 241 (old 2440:241);

Section 001

MW 02:30 pm - 03:15 pm; Room: Polsky 222.

**INSTRUCTOR:** 

Dr. Zarreen Faroogi, Ph.D.

Professor, Computer Information Systems, E-MAIL ADDRESS: zarreen @ uakron.edu

**OFFICE: POLSKY M186H** PHONE No.: (330)-972-8858.

I am available by appointment or in my office during my office hours. The office hours are posted outside my office. There is voicemail at this phone number, in

case you call when I am not in my office.

**OFFICE HOURS:** As indicated on Brightspace.

If these times do not suit you arrangements can be made for an appointment. Feel

free to use the e-mail.

When submitting assignments use the following convention to name your files:

YourFirstNameYourLastName-Course#-Lab#;

e.g., if your name is John Smith and you are submitting lab assignment 4, then the file name will be: JohnSmith-241-Lab4. The file extension is determined by what software you create the document with. Also, **DO NOT send me unsigned emails.** 

COURSE **DESCRIPTION:** 

This course introduces the concepts and practices of analyzing, designing and implementing computer information systems.

(CREDITS: 3.0 semester-hours.)

PREREQUISITE:

Database (2440:180) and a language course (160, 170, or 256) course

TEXT:

Systems Analysis and Design in an Age of Options, by Gary Spurrier and Keikki Topi, Danvers, MA: Prospect Press, 2021 [ISBN-13: 978-1-943153-7]

You can buy the ebook at lower prices compared to the print version.

**PROGRAM** OUTCOMES As part of the learning process in this course the student will be able to satisfy the following program outcomes by the end of the course.

- 1. Apply logical thinking and problem solving skills to effectively solve business problems using computer technology.
- 2. Demonstrate oral and written communications to collect business process information, clarify business needs and communicate proposed business solutions.
- 3. Demonstrate skill proficiency in the chosen CIS degree option.
- 4. Analyze and synthesize IT information to apply learned skills to new technologies and software languages beyond the scope of the curriculum.
- Demonstrate interpersonal relation skills by working as an effective team

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member to solve business problems.

GOALS:

The **GOAL** of this course is to prepare a student of Computer Information Systems to plan and implement a complete computer information system using various methodologies.

This goal will be achieved through the use of the following:

- Classroom Lectures, Demonstrations and Discussions;
- Textbook Reading Assignments; And Exercises.

**OBJECTIVES:** 

#### At the end of this course the student will be able to do the following:

- Use standard techniques for analyzing computer information systems requirements. [POs 1, 3, 4]
- Apply structured analysis and design techniques to document and manage the systems analysis and design process. [POs 1, 3, 4]
- Prototype computer information systems. [POs 1, 3, 4]
- Complete a structured walkthrough, [POs 1, 3, 4]

**SUPPLIES:** 

NOTE: The textbook and all the relevant supplies are available in the bookstore

ATTENDANCE:

Students are expected to attend class. If a student misses class, it is the student's responsibility to turn in assignments and to make arrangements with other students for class notes and/or class handouts.

EXAMS:

There will be three exams during the semester that will count toward the student's grade (see **GRADING**). All Exam materials will be kept by the Instructor.

DO NOT MISS THE LAST EXAM.

The exams will cover material covered in the lectures, the laboratories, the textbook, and other directly related topics.

For the exams the student must appear in person on the campus and take the exam. The exams will not be on the Internet.

The exams will be multiple-choice and you will need a No. 2 pencil to fill out the Scantron sheets.

USE OF CELL PHONES BY ANY STUDENT DURING THE EXAMS IS NOT PERMITTED AND WILL RESULT IN THE GRADE OF "F" FOR THAT EXAM.

GRADING:

Grading will be based on accumulated points for Attendance and Class Participation, Exams, Labs/Assignments, and Quizzes. Weights for the different components will be as follows.

Grade	Points (%)		
A	94 - 100		
A-	90 - 93		
B+	87 - 89		
В	84 - 86		
B-	80 - 83		
C+	77 - 79		
С	74 - 76		
C-	70 - 73		
D+	67 - 69		
D	64 - 66		
D-	60 - 63		
F	0 - 59		

Component	Maximum Points	Weight
Attendance/Class Part.	05	5.0%
Exams	70	70.0%
Labs	25	25.0%
Total:	100	100%

Carefully look at the weights for the different components in grading. Even if

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somebody gets 100% on all the exams (which I have not seen up to now in this class), the best grade you can get is a "C-". Normally the grade would be in the "D" – "F" range if the lab assignments are not done and submitted.

Grades Calculation: average for attendance, exams, and labs is evaluated, weighted average of these gives the overall grade.

In general, the "I" (incomplete) grade should be avoided. It may be possible to pursue an "I" grade in circumstances beyond student's control. In case somebody is interested in pursuing this possibility because of unusual circumstances, read about it in the college catalog, then consult with your instructor.

### ACADEMIC HONESTY:

Academic integrity is expected. When you put your name on a lab assignment, quiz or exam, it is understood that it is solely your work. Plagiarism and cheating in any form are not acceptable, and it is your responsibility to understand what this means.

All University of Akron guidelines and policies on academic honesty and plagiarism must be adhered to (copies of these policies are available from the Office of Judicial Affairs). The highest levels of ethical conduct are expected from students. Others may proofread or check work, but the student must originate the content of all work. It is the policy of The University of Akron that a student who is engaged in acts of plagiarism and/or cheating, may be subject to a course grade of F, dismissal from a class and the University disciplinary procedures.

AI tools (such as ChatGPT) are powerful tools that can be used to aid in the learning process. Students should look to their instructors for guidance on the fair and ethical use of AI tools for this course. The inappropriate or unethical use of such technologies will violate the Code of Student Conduct as cheating, plagiarism, fabrication, unauthorized collaboration, misrepresentation, and/or gaining an unfair advantage.

#### USE OF GENERATIVE AI

#### Policy for Our Class: AI/ChatGPT Usage

ChatGPT and other AI programs are a tool that are currently being used in some cases by professionals to structure, outline, and draft content. The use of AI is not strictly forbidden in this course, however, there are certain types of assignments where it may NOT be used.

In addition, if you utilize AI to draft content for a paper, project, or assignment, you must cite the AI used at the bottom of the document. As a rule of thumb, if the instructor can tell that you used it, you will likely fail the assignment for reasons related to the quality of your content.

#### You May Use AI to:

- 1. Outline a skeleton answer for a case study.
- \*\*Note: Again, if you use AI to generate a draft, you must indicate that in a citation at the end of your document.\*\*

#### You May NOT Use AI to:

- **1. Write** portions of answers that ask for an opinion/perspective.
- **2. Draft or write** a personal reflection or a review.
- ${\bf 3.\,Apply}$  concepts, principles, and theories as discussed in the text and class to a case study

#### Consequences for violating the above usage rules.

Please refer to the University of Akron policy on ethical use of AI above.

Academic misconduct will be reported to the Department of Student Conduct and Community Standards.

#### INFORMATION FOR STUDENTS WITH DISABILITIES:

Pursuant to University policy #3359-38-01, The University of Akron recognizes its responsibility for creating an institutional atmosphere in which students with disabilities have the opportunity to be successful. Any student who feels he/she may need an accommodation based on the impact of a disability should contact the Office of Accessibility at 330-972-7928 (v), 330-972-5764 (tdd) or <a href="mailto:access@uakron.edu">access@uakron.edu</a>. The office is located in Simmons Hall Room 105.

After the student's eligibility for services is determined, his/her instructors will be

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provided a letter which will outline the student's accommodations.

The office of Accessibility provides individualized reasonable accommodations, auxiliary aids, and services. Accommodations for the course can only be made if you have registered with this office. This information will remain confidential between you and me. ACCESS web site is: <a href="http://www3.uakron.edu/access/">http://www3.uakron.edu/access/</a>

If you have a documented disability and require accommodations in this course, please let me know immediately. If you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please contact me immediately also. My office location and hours are given above.

#### Title IX, Campus SAVE Act, Violence Against Women Act

The University of Akron is committed to providing an environment free of all forms of discrimination, including sexual violence and sexual harassment. This includes instances of attempted and/or completed sexual assault, domestic and dating violence, gender-based stalking, and sexual harassment. If you (or someone you know) has experienced or experiences sexual violence or sexual harassment, know that you are not alone. Help is available, regardless of when the violence or harassment occurred, and even if the person who did this is not a student, faculty or staff member.

Confidential help is available. If you wish to speak to a professional, in confidence, please contact:

- ·Rape Crisis Center <u>www.rccmsc.org</u> 24 Hour Hotline: 877-906-RAPE Office Located in the Student Recreation and Wellness Center 246 and the office number is: 330-972-6328
- •University Counseling and Testing Center <a href="mailto:uakron.edu/counseling">uakron.edu/counseling</a> 330-972-7082
- ·University Health Services uakron.edu/healthservices 330-972-7808

Please know the majority of other University of Akron employees, including faculty members, are considered to be "responsible employees" under the law and are required to report sexual harassment and sexual violence. If you tell me about a situation, I will be required to report it to the Title IX Coordinator and possibly the police. You will still have options about how your case will be handled, including whether or not you wish to pursue a law enforcement or complaint process. You have a range of options available and we want to ensure you have access to the resources you need.

Additional information, resources, support and the University of Akron protocols for responding to sexual violence are available at <a href="mailto:uakron.edu/Title-IX">uakron.edu/Title-IX</a>.

#### COVID-19 Related

The COVID-19 pandemic is still present and serious. Before entering class, you should have completed your daily health assessment. You should not come to class if you fail your health check or feel ill. At that time, I also ask you notify me that you will be absent. When campus policies require masks to be worn indoors, all students are required to wear a mask during in-person classes. While you are in class on campus, you are required to: sit in your designated seat, always cough or sneeze into your elbow or a tissue, and adhere to other public safety protocols and directives for your specific classroom/lab/studio. Students who do not follow these health and safety requirements will be instructed to leave class immediately. Students who violate this protocol will need to leave the classroom and MAY be marked absent. Repeated violations of these health-saving protocols may lead to sanctions under the Student

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	Code of Conduct up to and including suspension or expulsion. Current guidelines can be found at: <a href="https://www.uakron.edu/return-to-campus/">https://www.uakron.edu/return-to-campus/</a> .
GENERAL POLICIES:	1. General respect for the classroom environment and fellow students must be adhered to. In this regard please read and follow two documents of the University: a). the article entitled "A Civil Climate for Learning: Statement of Expectations" in the Undergraduate Bulletin of the University of Akron. And b) "The Code of Student Conduct" as available in the Undergraduate Bulletin and also at the web site <a href="http://www.uakron.edu/studdev/conduct.html">http://www.uakron.edu/studdev/conduct.html</a> . It specifically defines Student Misconduct.
	2. If a student does part of the course work and then neither attends the lectures nor the lab and does not do the lab work, will get an "F".
	3. Incompletes ("I" grade) are not to be used as excuses for not studying properly. "I" will not be given when the final exam is the only requirement missing for the grade, except under unusual circumstances (e.g., proof of medical or family emergencies). In general, the "I" (incomplete) grade should be avoided. It may be possible to pursue an "I" grade in circumstances beyond student's control. In case somebody is interested in pursuing this possibility because of unusual circumstances, read about it in the college catalog, then consult with your instructor. The student must have a passing the course at the time when the request is made.
	4. All the lab assignments and any other paper work (other than exams and reports) that belongs to a student must be picked up before the end of the second week of the next semester, otherwise I will discard it. (I cannot keep collecting papers from students who do not show any interest in picking up their own work.)
	5. Students whose names do not appear on the class list will not be permitted to participate (take exams or receive credit) without first showing proof of registration (Schedule of Classes and Statement of Account) by no later than the relevant date given on the Registrar's website.
	The University of Akron Attendance Policy is described in the Undergraduate General Bulletin; the University College subscribes to this policy. Students are expected to attend class and on time.
	6. It is illegal at the University of Akron to discriminate against anyone on the basis of race, religion, sex, age, national origin, or heritage.
	7. NO FOOD OR DRINKS ARE ALLOWED IN ANY COMPUTER LAB AT ANY TIME. (THIS MEANS NO EATING OR DRINKING IN THE LAB.)
	8. No chewing gum or gum-popping in class.
	9. Children are not allowed in the computer labs with their parents.
	10. Beepers, cell phones, and other mobile communication devices are permitted to be operated in class. <b>If you carry them turn them off in class.</b>
	11. If the University is closed for some reason (holiday or snow storm, etc.), then the class will not be held (even if there might be an error in the syllabus).
	12. FOR REGISTRATION, ADD/DROP, WITHDRAWAL, FINAL EXAMS AND FOR ANY OTHER ACADEMIC ACTIVITY (LIKE GRADUATION) OR BREAKS WHERE RELEVANT THE DATES AT THE REGISTRAR'S WEBSITE APPLY.

**NOTES:** 1. This syllabus is tentative. I may go faster or slower and may cover other topics near the end of the course (in which case the students will be informed at an appropriate time).

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**DEPARTMENT** 

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- $\hbox{2. The exams will cover the material covered since the beginning of the semester OR} \\$  the last exam.
- 3. If the University is closed for some reason (holiday or snow storm, etc.), then the class will not be held (even if there might be an error in the syllabus).
  - 4. Final Exam time is given in the table below.

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#### (TENTATIVE) SYLLABUS

CLA	ASS	DATE	LECTURE TOPIC	TEXT REFERENCE	ASSIGNMENTS
1	MW (Sec 001)	Week 1 (08/28 - 09/01)	Review Syllabus; Introduction to the Course; The essence of SysAD	Ch. 1	
2	MW (Sec 001)	Week 2 (09/04 – 09/08)	Sep. 04 = Labor Day; NO CLASSES) Identifying Opportunities for Business Transformation with IT	Ch. 2	Labs will be assigned as the chapters in the book are finished.
3	MW (Sec 001)	Week 3 (09/11 - 09/15)	Identifying and Documenting Key Concepts of DOI	Ch. 3	
4	MW (Sec 001)	Week 4 (09/18 - 09/22)	User Stories and UI Models	Ch. 4	Labs will normally be due one week after they are assigned.
5	MW (Sec 001)	Week 5 (09/25 – 09/29)	EXAM #1 (on Monday) Selecting Optimal Project Approach	Ch. 5	
6	MW (Sec 001)	Week 6 (10/02 - 10/06)	Project Planning	Ch. 6	
7	MW (Sec 001)	Week 7 (10/09 – 10/13)	Selecting Implementation Approach	Ch. 7	
8	MW (Sec 001)	Week 8 (10/16 - 10/20)	Creating Use Case Narratives	Ch. 8	
9	MW (Sec 001)	Week 9 (10/23 - 10/27)	Architectural Context for System Development	Ch. 9	
10	MW (Sec 001)	Week 10 (10/30 - 11/03)	EXAM #2 (on Monday) Estimating Business Benefits	Ch. 11	
11	MW (Sec 001)	Week 11 (11/06 - 11/10)	Planning to Succeed Using Project Documents	Ch. 12	
12	MW (Sec 001)	Week 12 (11/13 - 11/17)	Designing User Experience and User Interfaces	Ch. 13	
13	MW (Sec 001)	Week 13 (11/20 – 11/24)	(Nov. 23 – Nov. 26 = Thanksgiving Break; University closes @ 4:00 pm on Nov.22) The Role of Business Analyst in Technical Design	Ch. 14	
14	MW (Sec 001)	Week 14 (11/27 - 12/01)	Iterative software Construction	Ch. 15	
15	MW (Sec 001)	Week 15 (11/04 – 12/08)	Change Management and Deployment	Ch. 16	
16	MW (Sec 001)	Week 16 (12/11 - 12/15)	Exam # 3; Wednesday, Dec. 13, 2023 @ 02:30 - 04:30 pm.		