Systems Analysis and Design
MIS 7376 – Spring 2024 – Section 24960

Lecturer

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Email is the best way to reach me.

Office Hours: Conversing by e-mail is always a good option. If you'd like to meet over Zoom please email me to coordinate.

Class schedule

Week	Dates	Topics / Exams	Assigned this week / due before end of next week
1	Jan-16 to Jan-20	Introduction/Free Class	**Nothing assigned**
2	Jan-21 To Jan-27	The Systems Analyst and Information Systems Development (Ch. 1)	• **Tech Brief 1** Topic Due Next Class: "Broadband-X: Enterprise Resource Planning Implementation" Read and write tech brief on assigned article from Harvard Business Review • **Role Playing Activity #1** - Instructions on Canvas 'Assignments' section
3	Jan-28 To Feb-3	• Project Selection and Management (Ch. 2) • Optional – Start Watching Requirements Determination (Ch. 3)	• **Tech Brief 2** Topic Due Next Class: What is Agile development? What are its advantages / disadvantages? What is SCRUM, and other methodologies, used to implement it? (Research on your own) • **Role Playing Activity #2** - Instructions on Blackboard 'Assignments' section • Study for Exam 1
4	Feb-4 To Feb-10	• <mark>**Exam 1 - Chapter 1 & 2**</mark> • Requirements Determination (Ch. 3) • Use Case Analysis (Ch. 4)	• **Tech Brief 3** Topic Due Next Class: What is "Digital Transformation"? Cite some examples across different industries. (research on your own) • **Role Playing Activity #3** – Instructions on Canvas 'Assignments' section
5	Feb-11 To Feb-17	• Use Case Analysis (Ch. 4) • Process Modeling (Ch. 5)	• **Tech Brief 4** Topic Due Next Class: What is blockchain? What are potential business impacts (including but also beyond just cryptocurrency)? (Research on your own) • **Role Playing Activity #4** – Instructions on Blackboard 'Assignments' section

6	Feb-18 To Feb-24	• Process Modeling (Ch. 5) • Data Modeling (Ch. 6)	• No Tech Brief assigned • **Role Playing Activity #5** – Instructions on Blackboard 'Assignments' section • Prepare for Exam 2
7	Feb-25 To Mar-2	• **Exam 2 – Chapter 3-6**	• **Tech Brief 5** Topic Due Next Class: What are the pros and cons to IT Outsourcing. (Research on your own) What are the major points / recommendations of the article Harvard Business Review "The Long-Tail Strategy of IT Outsourcing"? Read and write tech brief on assigned article from Harvard Business Review. • No role-playing activities for next class assigned
8	Mar-3 To Mar-19	• Moving into Design (Ch. 7) • Architecture Design (Ch. 8)	• **Tech Brief 6** Topic Due Next Class: What does CAPEX vs. OPEX mean? What are Cloud Services like SaaS, PaaS, IaaS? What is software containerization? How are these changing the way organizations plan their IT? (Research on your own) • **Role Playing Activity #6** – Instructions on Blackboard 'Assignments' section
9	Mar-10 to Mar-16	**Spring Break**	
10	Mar-17 To Mar-23	• User Interface Design (Ch. 9)	• **Tech Brief 7** Topic Due Next Class: What is Machine Learning, and AI? What is robotic process automation (RPA)? What are Generative AI and Large Language Models? Why and how are organizations using these things to create business value? What are some of the concerns? (Research on your own) **Role Playing Activity #7** – Instructions on Canvas 'Assignments' section
11	Mar-24 To Mar-30	• Program Design (Ch. 10)	• **Tech Brief 8** Topic Due Next Class: Big Data, Columnar Databases and No SQL – What's the impact; why and when is it important? (Research on your own) • **Role Playing Activity #8** – Instructions on Blackboard 'Assignments' section
12	Mar-31 To Apr-6	• Data Storage Design (Ch. 11)	• **Role Playing Activity #9** – Instructions on Blackboard 'Assignments' section • No Tech Brief assigned • Prepare for exam 3
13	Apr-7 To Apr-13	**Exam 3 – Chapter 7-11**	• **Tech Brief 9** Topic Due Next Class: What are some emerging innovations that we've not already directly discussed that could redefine IT and how we work and live? (Research on your own) • No role-playing activities for next class assigned

14	Apr-14 To Apr-20	Watch Class #10 • Moving into Implementation (Ch. 12)	• **Tech Brief 10** Topic Due Next Class: What is IT Service Management? What is ITIL & ITSM? What is the concept of "DevOps" and Continuous Integration / Continuously Deployment? (Research on your own) • **Role Playing Activity #10** – Instructions on Blackboard 'Assignments' section
15	Apr-21 To Apr-27	Watch Class #11 • Transition to the New System (Ch. 13)	• No Tech Brief assigned • No role-playing activities for next class assigned
16	Apr-28 To May-4	Watch Class #12 The Movement to Objects (Ch. 14)	• No Tech Brief assigned • No role-playing activities for next class assigned Prepare for exam 4
17	Apr-28 To May-4	**Exam 4 - Chapters 12–14**	

Important Days (see Academic Calendar)

See the Academic Calendar

Purpose of the Course

After completing this course students will be prepared to confidently contribute to projects that aim to improve organization's business processes using software, hardware, and computer networks. Students will be able to determine the financial and operational impact of information systems and make good decisions about when and how to acquire, design, implement, or outsource information systems for an organization.

This course provides basic skills for all students who will need to know how information systems can be used to achieve business goals in small and large organizations.

I augment the class with assignments on current IT topics on which future business leaders ought to be conversant. Also, to help re-enforce what we study, I try to share real-world examples from my career experiences. This includes a role-playing exercise thought out the semester that's based on a real system created at HP.

Course Textbook & Materials

Dennis, A., B. H. Wixom, and Roth, *Systems Analysis and Design*. 5th Edition, John Wiley and Sons

Grading Summary

The final grade in this class consists of…

- **Exam one** = 15%
- **Exam two** = 20%
- **Exam three** = 25%
- **Exam four** = 20%
- **Ten role-playing activities** = 10%
- **Ten "Tech Brief" papers** = 10%

Grading Details

Exam one:

- Includes Chapters 1 & 2. It will have about 20 questions.

Exam two - four

- Examination two includes Chapters 3-6, Examination three includes Chapters 7-11 and Examination four includes Chapters 12-14

- Each will have 40 - 50 questions.

Additional Notes on Exams

- It's required you be on camera when taking the exam, and you will need install the Respondus Lockdown Browser on your PC

- Makeup examinations arranged for students with a medical doctor's letter stating the date and the reason for absence from the examination

Role-playing activities:

- There are a total of 10 classroom sessions in which we'll be working on a role-playing exercise based on a real-world systems development project ("Custom NPI Request Management System"). We'll typically start an assignment in-class, with some portion to be completed outside class. You must upload your work to Blackboard by the start of the next class. You must complete all 10 activities for a perfect score. Assignments turned in after the due date can receive up to half credit but cannot be turned in after the exam before which it was assigned.

Tech Briefs:

- You're asked to research interesting and trending topics for which master's candidates should have a basic understanding. Sources of information are readily available through internet research. You'll complete a one-page write-up (double spaced) on the topic to be turned in the week after the topic is assigned. The paper needs to be written IN YOUR OWN WORDS.

- The Turn-It-In feature of Blackboard will tell you and me the percentage of similar wording found from internet sources and previous student's papers. If your first paragraph contains material copied from internet sources you will receive a zero, and you may get points taken off if 50% or more of your paper is identified from internet sources.

- FORMAT IS IMPORTANT and should be as follows:

  1) Paragraph #1) No more than 3 to 6 sentences. A succinct statement synthesizing your most thought-provoking observations and your essential points about the topic. **Get to your point quickly**; within the first two sentences you should grab my attention and convince me it's worth reading the rest of your brief. Somewhere in this first paragraph you should relate any real-world experience you have with the topic, or, explain how the topic might affect you in the future. If you don't think the topic remarkable or important explain why.

     As you write this paragraph imagine an executive or other respected person in your organization writes to you asking for your insight on the topic. This is a busy person; you have ~30 seconds of their time in reading your email response to give them the info they want and gain their trust that you are a 'go-to' expert

  2) Paragraph #2) any additional or interesting background, facts, or statistics to back up your claims in the first paragraph, or any other interesting information you'd like to include as a result of researching the topic.

- Each of the ten papers will count 10 points toward the total TB grade, each TB graded as follows:
  1) Degree to which brief makes succinct, salient points and draws interesting conclusions in the first paragraph = 8 points
  2) Brief is about one page, double-spaced, but does not exceed one page, and otherwise follows the format described above = 2 points

How to calculate your final course grade

Course score = (.15)(Exam 1 score) + (.20)(Exam 2 score) + (.25)(Exam 3 score) + (.20)(Exam 4 score) + Sum of role playing activity scores + (.10)(total number of points from 10 Tech briefs)

Example:
Exam 1 score   = 90;
Exam 2 score   = 84;
Exam 3 score   = 88;
Exam 4 score   = 80;
Number of activities completed = 9 (missed one activity)
Perfect score on 10 Tech briefs (10 points per brief) = 100

Example course score = (.15)(90) + (.20)(84) + (.25)(88) + (.20)(80) + 9 + 10
           =   13.5   +   16.8 +   22   +   16   + 9 + 10 = 87.3 (B+)

The <u>letter grade</u> for the course is based on my curve of the course score. In this class the usual curve is:

100	-	94	A
93	-	89	A-
88	-	84	B+
83	-	79	B
78	-	75	B-
74	-	70	C+
69	-	66	C
65	-	62	C-
61	-	58	D+
57	-	54	D
53	-	50	D-
49	-	0	F

How to appeal your grade

Students can appeal their grade by writing a letter to the instructor that states the exam number and the question or the assignment number that they believe has a problem and what they suggest to be the correct answer or response.

<u>Academic honesty and code of conduct</u>
In this class students are expected to adhere to the "*Bauer Code of Ethics and Professional Conduct*" as described at the Bauer web site at: http://www.bauer.uh.edu/centers/bcbe/Bauer-Code-of-Ethics-Professional-Conduct.pdf