

INSTR: Assoc. Professor Nora Braun, Office 314A Memorial

OFFICE MWF 9:30 – 11:00 and prior to Sunday class

HOURS: Always: available by email or phone, or by appointment

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TEXT: Systems Analysis & Design, Seventh Edition by Shelly Cashman Rosenblatt. This text will also be used for the follow-up capstone course MIS476.

OBJECTIVES: The student who successfully completes this course:

1. Understands basic information about the process of systems analysis and design
2. Demonstrates basic skills in performing systems analysis and design such as:
 - a. data and process modeling
 - b. defining requirements in a project repository
 - c. data and process analysis
 - d. file and database design
 - e. input and output design
 - f. user interface design
 - g. program design
 - h. object modeling
3. Prepares a project notebook which applies the above techniques
4. Demonstrates knowledge of software tools such as Visible Analyst
5. Develops communication skills
6. Appreciates the many skills required to do good systems analysis and design and is prepared to tackle a "real" system in MIS476.

APPROACH: Systems analysis and design techniques will be demonstrated and practiced in class with case studies used to enhance understanding. A semester-long project will dominate homework activities for the course. Augsburg's Moodle facility will also be used to share learning reflections and create a virtual learning community.

EVALUATION:

| | Points | Point Grade Distribution |
|----------------------|---------------|--------------------------------------|
| 1. Project Notebook | 170 | 340 to 316 → 4.0 |
| 2. Project Prototype | 50 | 315 to 299 → 3.5 |
| 3. Final Exam | 65 | 298 to 282 → 3.0 |
| 4. Journal Entries | 40 | 281 to 265 → 2.5 |
| 5. Participation | 15 | 264 to 248 → 2.0 247 to 231 → 1.5 |

POLICIES:

Honesty: In accordance with Augsburg's academic honesty policy, all student work will be of their own creation. Academic dishonesty will result in a zero for the work.

Attendance/Participation: Since the weekend college trimester contains only 8 class meetings, students are expected to attend all classes unless prior arrangement is made with the instructor. Students are expected to actively participate in class discussions and exercises, and will also be given opportunities to lead the class in certain activities like learning new software, role playing cases in the text, etc. or to share their learning journal insights.

Schedule: An initial class schedule is attached. Any changes will be negotiated between the class and the instructor. More detailed instructions for each milestone will be provided in class if needed, but milestone submission dates are set. *Late milestones will be penalized 10% and will not be accepted more than 1 class period late.*

***Class 1 Prep:** Reading assignments and journal entries are to be done prior to class. The journal entries are made in Moodle in each student's online blog **no later than the day before class.**

Reflection Journal Entries (RJE)
(postings 5 pts each, summary 10 pts)

RJE 1: What are your expectations of an MIS career? (What you envision doing, what you think will be challenging, what will be easy, etc.)

RJE 2: Reflect on areas you feel are your strengths and areas of weakness. How will each of these areas affect your MIS career?

RJE 3: Discuss an aspect of the MIS discipline that is important or intriguing to you and why.

RJE 4: What other discipline or area of study do you think impact a successful MIS/IT career? Why?

RJE 5: Identify a theory or idea from a non-business/non-MIS course that relates to concepts in IT. Explain where it came from, what it is, and how it relates to MIS/IT.

RJE 6: What does it take to be a leader in your field? How does that mesh with your own beliefs, ethics, decision-making style etc.?

RJE Summary: a typed (1 – 2 pages) summary to be included in your project notebook that reflects your feelings and beliefs toward a career in IT. (Drawn from key insights in your blog postings.)

Project Notebooks

Each student will develop a project notebook containing the milestones for the project as outlined in the class syllabus. Since the resulting project notebook should be a valuable job hunting and professional reference tool, milestones may be returned from grading designated for "rework". Reworked milestones are to be turned in on the last day of class as part of the project notebook, with the new milestone in front of the graded milestone, and will be re-graded at a maximum of 90% of the milestone points. Late milestones will be penalized 10% and accepted no more than one class period late. (NOTE: Milestones may also be requested as "re-do" prior to initial grading and resubmitted the following class period without late penalty.)

MILESTONE DESCRIPTIONS

Milestone 1: Project Planning (20 points)

Use the information for the New Century Health Clinic case study on pages 38 & 81 to create a memo to Dr. Jones to begin your preliminary investigation. The memo should include: your understanding of the project scope and benefits, an initial set of questions to assess the project feasibility, and an initial schedule of people or areas you want to use for your fact-finding (include objective and techniques to use for each).

Milestone 2: Process DFDs (25 points)

Prepare all documents identified in questions 1 through 4, page 186-187, for New Century Health Clinic. Documents should be done in Visible Analyst, Visio, or other drawing software you have access to.

Milestone 3: Object Oriented Models (25 points)

Complete the object models identified on page 222 in questions 1 through 4 for NCHC

Milestone 4: Requirements Document (20 points)

Use the NCHC case materials on page 275 and the assignment questions 1, 2 & 4 to prepare a requirements document with your recommendation for the next phase.

Milestone 5: ERDs (25 points)

Prepare the following data models preferably done in Visible Analyst, Visio, or other drawing software you have access to.

1. ERD with relationships and cardinality (refer to figure 7-21, page 322)
2. ERD with all data attributes and keys, in 3rd normal form

Milestone 6: User Interface and Reports (20 points)

Create mock-ups of input forms in Access and reports in Excel

1. Input forms: new patient input form and procedure input form. Also include a write-up of data validation needs for each input form.
2. Reports: patient billing statement and monthly Claim Status Summary report. See page 329 #1 for data required on Claim Status Summary report.

Milestone 7: System design (20 points)

Complete the assignments 1 through 4 on page 441 for the NCHC case. For #4, give bullet points for each section of your system design specifications (rather than describe contents).

Final Project Notebook (15 points)

Put all of your milestones together neatly in a binder. Include a cover page, table of contents, an executive summary, and a brief description before each milestone explaining the purpose for the milestone (why is this milestone done, not what it is). If you want any of your milestones regraded, include the new one on top and the old graded one right behind it. Don't forget to add your RJE Summary at the end!

Access Prototype (50 pts): Build a prototype for NCHC in Access based on your milestones 2, 5, and 6. Prototypes will be presented in the last class and turned in with the notebook on a CD.

Minimum to include:

- Tables: set up tables for your entities with appropriate field sizes, defaults, and edits. Key at least 5 records in each table.
- Functions: create a switchboard menu with links to submenus or functions (OK for most of the links to go to 'dummy' pages)
- Input and Output screens: create two input screens and one output report (be sure to link to each from the menu)
- Query: create one query that NCHC might logically need and link to it from the menu

CLASS SCHEDULE

| DATE | TOPIC | READINGS | ASSIGNMENTS |
|----------|--|---------------------------------|--|
| Sept. 9 | Introduction & Overview Interviewing for Requirements | Chapters 1-3 Toolkit Part 1 | RJE #1 |
| Sept. 23 | Process Modeling Case Tools | Chapter 4 and Toolkit Part 2 | Milestone 1: Project Planning RJE #2 |
| Oct. 7 | Object Modeling | Chapter 5 | Milestone 2: Process DFDs RJE #3 |
| Oct. 21 | Documenting Requirements Project Value | Chapter 6 and Toolkit Part 3 | Milestone 3: Object Oriented Models RJE #4 |
| Nov. 4 | Data Analysis and Modeling | Chapter 8 | Milestone 4: Requirements Document RJE #5 |
| Nov. 18 | User Interfaces System Architecture | Chapters 7 and 9 | Milestone 5: ERDs RJE #6 |
| Dec. 2 | System Implementation, Operations, and Security | Chapters 10 and 11 | Milestone 6: User Interface and Reports Milestone 7: System design |
| Dec. 9 | Final exam and prototype presentations | | Final Notebooks with TOC, Exec. Summ, tabs RJE Summary (in notebook) |