ISQA 8040 – An Overview of System Development
Qualifying Exam Study Guide

This waiver examination is an essay- and problem-based examinations.

You will have to understand the theory behind data flow diagrams and be able to detail a problem in a diagram.

Also, you will have to create entity relationships diagrams and be able to normalize tables. Again, you will have a scenario and have to develop the diagrams that satisfy the requirements.

Several textbooks will be used and no certain textbook recommended for this course.

PROFESSOR:

Name:	Dr. Sid Davis
Office:	PKI 177C
Office Hours:	by appointment, or online via e-mail or Skype
Office Phone:	554-2093
E-mail Address:	sidneydavis@unomaha.edu
Skype address:	siddavisphd

REQUIRED TEXT:

Hoffer, J. A., George, Joey F., and Valacich, Joseph S. (2014), *Modern Systems Analysis and Design*, Pearson, Seventh Edition; ISBN-10: 0132991306 • ISBN-13: 9780132991308

COURSE OBJECTIVE:

The purpose of this course is to provide graduate students with an introduction and overview of systems analysis and design. It covers the concepts, skills, methodologies, tools and perspectives essential for systems analysts to successfully develop information systems. The systems development approach we will discuss is called Structured Systems Analysis and Design (SSAD). Central to the structured approach is a methodology called the system development life cycle (SDLC), which divides the development process into a set of clearly defined steps or stages, including: planning, analysis, design, implementation, and maintenance. We will discuss each of these phases in detail and its role in the development process.

When you complete the course, you should be able to:

- understand each phase of the SDLC and the important role it plays in systems development
- identify the people, data, activities, networks, and technology related to a system
- start with a problem statement to develop a set of system requirements
- build a process model of the system showing inputs, outputs, processes, data flows, and data stores
- build a data model of the system using entity-relationship diagrams
- design and implement a database
- design forms and reports
- design software interfaces
- understand the system implementation process

The course material consists of 5 major sections:

- Foundations for System Development
- Planning
- Analysis

- Design
- Implementation and Maintenance

COURSE CONDUCT:

This is an online course. Lectures will be presented via Blackboard (as PowerPoint slides _and_ as videos). It is your responsibility to view the lecture material on a regular basis and in a timely way. Lectures will be made available at the beginning of each week. You will also be assigned to a team to carry out the phases of a system development project. It is your responsibility to maintain regular contact with your team members and to contribute to the project in a meaningful way.

Course activities include the following:

1) **EXAMS**

There will be 2 exams this semester. Each exam will cover concepts discussed in the lectures and developed in the assigned readings. The final exam will NOT be comprehensive.

Each exam will consist of two parts: 1) a _timed_ part that will be administered using Blackboard, and 2) a _take-home_ part (also provided via Blackboard) that will require you to apply the techniques and skills covered during the class. More information will be provided about the exams (via Blackboard) during the semester.

Please note: The exams require you to do your _own_ work. Because these exams are given online, you will have access to course materials. However, you may **NOT** work collaboratively with other students in this course, or with any other individuals. **Working collaboratively on an exam will result in a failing grade for the exam AND for the course.**

2) **SYSTEMS ANALYSIS AND DESIGN PROJECT (Team Activity)**

You will be assigned to a student team, with which you will complete 7 phases of a case-based course project. Each phase will correspond to steps and activities of the System Development Life Cycle (SDLC). The end result of the project will be the analysis, development, and documentation of a computer-based information system for a hypothetical organization. At the end of the semester, each team will present its work. The team presentation will be scheduled during the last week of the semester and will be conducted either as an online or in-person presentation (depending on team member preferences).

Team conduct: Please note that an online course poses unique challenges in working with a project team. It is your responsibility to maintain close and timely contact with your other team members. I recommend the following guidelines to monitor individual contributions to the group and to maintain a good working relationship.

1) Each group member should be assigned a clear and specific role for each phase of the project. In fact, I will ask teams to report individual assignments and to submit peer evaluations along with each phase submission.

2) If a group member fails to carry out his/her assignment, as a first step, other team members should try to resolve the situation by talking with the individual. If this strategy fails, then discuss the situation with me, and I will follow up with the individual. If my talking with the person fails to bring resolution, I will drop this student from the group, and he/she will do all future project work <u>individually</u>.

<u>Note on academic honesty.</u> **You are expected to adhere to the university guidelines on academic honesty and integrity. Any violations of those guidelines will result in student dismissal and a failing grade for the course. All class work is expected to be <u>strictly</u> your own. No collaboration is allowed, other than among group members on the team project.**

All case assignments in this class are due on the date indicated, either in the course schedule or by the professor (via Blackboard). Project work that is submitted late will be accepted – but, with some penalty. The penalty will be a 10% deduction in the grade for each 24-hour period the assignment is late. For example, if an assignment is due by 10:00 PM, and is turned after that time, but before 10:00 PM on the following day, then 10% will be deducted. If it is turned in after 10:00 PM on the second day, but before 10:00 PM on the third day following the due date, then 20% total will be deducted, etc. Please turn in your case assignments on time to avoid these penalties. Submit all your assignments using Blackboard.

Note that the EXAMS have their own late submission policy. For exams, the penalty is a 10% deduction in the grade for each <u>ONE-HOUR</u> time period the exam is submitted late.

PLEASE DO NOT USE E-MAIL TO SUBMIT ASSIGNMENTS!! USE BLACKBOARD INSTEAD. (I WILL NOT ACCEPT E-MAIL SUBMISSIONS.)

At the end of EACH phase of the team project, each student will complete a <u>peer evaluation form</u> to evaluate his/her performance and the performance of all other team members for that phase. The professor will use the input provided from these evaluations to help determine students' project grades. Evaluations that are submitted late will receive a 1-point deduction for each 24-hour period they are late. There are 5 points total for each peer evaluation.

Grading:

The final grade for the course will be determined as follows:

Team Project:

Phase 1	5%
Phase 2	10%
Phase 3	15%
Phase 4	15%
Phase 5	15%
Phase 6	10%
Project Presentation (7)	10%
Exam 1	10%
Exam 2	10%
Total	100%

Grading Scale:

95.5 – 100	A+
92.5 – 95.4	A
89.5 – 92.4	A-
85.5 – 89.4	B+
82.5 – 85.4	B
79.5 – 82.4	B-
75.5 – 79.4	C+
72.5 – 75.4	C
69.5 – 72.4	C-
65.5 – 69.4	D+
62.5 – 65.4	D
59.5 – 62.4	D-
59.4 or below	F

The next page shows a topic outline for the course, including readings and assignments. The outline provides a general plan only; deviations/changes may be necessary. Also, additional readings may be assigned from journals or the Web.

Course Schedule
ISQA 8040-850
Fall 2013

DAY	DATE	TOPIC	Reading Assignment	Assignment Due
Week 1	8/26	• Introduction and Overview of the course • The Systems Development Environment	Chapter 1	
Week 2	9/2	• The Origins of Software	Chapter 2	
Week 3	9/9	• Managing the IS Project	Chapter 3	
Week 4	9/16	• Identifying and Selecting Systems Development Projects	Chapter 4	**Phase 1 (proposal)**
Week 5	9/23	• Initiating and Planning Systems Development Projects	Chapter 5	
Week 6	9/30	• Determining System Requirements	Chapter 6	**Phase 2 (economic feasibility, ROI)**
Week 7	10/7	• Structuring System Process Requirements	Chapter 7	
Week 8	10/14	• **EXAM 1**	**Ch. 1-6**	
Week 9	10/21	• Structuring System Data Requirements	Chapter 8	**Phase 3 (process modeling)**
Week 10	10/28	• Designing Databases	Chapter 9	
Week 11	11/4	• Designing Forms and Reports	Chapter 10	
Week 12	11/11	• Designing Interfaces and Dialogues	Chapter 11	**Phase 4 (data model and database design)**
Week 13	11/18	• Distributed and Internet Systems	Chapter 12	
Week 14	11/25	• System Implementation	Chapter 13	**Phase 5 (arch, controls, I/O, interface)**
Week 15	12/2	• Maintaining Information Systems	Chapter 14	**Phase 6 (testing, implementation, , maintenance)**
Week 16	12/9	• **EXAM 2**	**Ch. 7-14**	
Week 17	12/16	• **Final Project Presentation**		**Phase 7 (team presentation)**

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