ISQA 8950: Capstone in Management Information Systems
Fall 2014
Department of Information Systems & Quantitative Analysis
College of Information Science & Technology
University of Nebraska Omaha

Dr. Deepak Khazanchi

Thursdays: 6:00pm – 8:40pm, PKI 279

PROFESSOR

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PROJECT CONSULTANT

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LOGISTICS

Prerequisites: Students must have six credit hours or fewer left in the program. Students must have completed ALL core classes with the exception of ISQA 8380.

Blackboard: Course documents and updated schedule information are available via Blackboard, so check early and often for the latest information.

Email: Ensure your email address in Blackboard is an address you check often. If not, then update your Blackboard profile to an email address you regularly use.

Required Course Materials:
- Readings as posted on Blackboard
- No specific textbooks are required, but books may be recommended during the semester.

ATTENDANCE POLICY

Class attendance is mandatory. *Students that do not attend the first class meeting may be disenrolled from the course at the discretion of the professor*.

Weekly class meetings are used to coordinate activities, to make decisions, to inform, and to be informed. The capstone project is the responsibility of the whole team; therefore, it is unacceptable to miss weekly classes except in the case of emergencies as specified by UNO graduate college policies. The professor must be notified in advance if you will miss class.

Further, it is expected that all students will arrive to class on time. Tardiness will negatively impact your grade.

COURSE OVERVIEW & LEARNING OBJECTIVES

The central challenge for management information systems professionals is to design, implement, and manage information systems in a timely fashion. Yet, real world problems are rarely solved using a single perspective using a single approach. To address information systems challenges effectively, one must leverage an integrated and balanced set of perspectives, techniques, and methods. This course enables students to learn how to solve these problems through an in-depth, practical experience.

The project will include conceptualization, analysis, design, and production of a working, functional prototype of the system which serves as a proof of concept for the client organization. It may also involve a pilot and/or implementation.

As a student in the course, you are expected to apply your knowledge, to practice different tools and techniques, to examine a variety of points of view, to critique readings, to respectfully challenge other ideas, to stretch your thinking, and to learn how to be an effective MIS professional.

Upon completion of the course, you should be able to:
- Demonstrate a command of concepts and applications as covered in the MS MIS core courses.
- Understand how MS MIS core subjects relate to real-world projects, including issues related to systems integration and strategy.
- Perform information systems analysis and design activities in a mid-sized project.
- Make an appropriate match between MIS systems problems and MIS analysis and design methods.
- Provide effective leadership in small MIS projects.
- Prepare and execute project meetings.
- Evaluate and approach design problems from multiple perspectives, including a technical, managerial, and end-user perspective, as well as understand the trade-offs among these perspectives.
- Make professional presentations and reports for an audience consisting of multiple stakeholders.
- Choose and use appropriate tools for project completion, including computer-based communication tools for team communication and modeling tools for task activities.
- Work effectively in a team as a leader and member.
- Demonstrate professionalism, respect for others (both oral and written), high ethical conduct, and business acumen.

COURSE TOPICS

The topics covered in this course include, but are not limited to: information systems development methods and techniques, agile methods and techniques, prototyping, participative design, project management methods and techniques, database design and management, systems architecture, usability theory and methods for presentation, and reporting. This course covers the full spectrum of information systems analysis, design, development, and prototyping. Systems integration, strategic issues, and proposed implementation guidelines are also addressed in the context of the project. Due to the nature and format of the course, the actual coverage and time spent on topics may vary.

For project management and systems development, agile methods are used. The scope of the project is managed through on-going consultation with the professor, project consultant, and other advisors invited by the professor.

COURSE ORGANIZATION

The course focuses on a real-world information technology problem that the students solve as a team. This problem is offered and owned by a community or organizational representative. The class is conducted as a project meeting every week. For each meeting, one of the students is the chair, and one is the secretary. The group must use an agenda in order to identify deliverables after each meeting. Robert's Rules of Order (http://www.robertsrules.org/) are encouraged to promote an effective meeting process. During the week, subgroups of students work on specific assignments that are defined during the project meeting. The subgroups present their results during each meeting.

Each meeting agenda and process is student-prepared and must be approved by the professor. Meeting minutes are prepared and shared with the student team, professor, and project consultant after each class meeting.

PROFESSOR AND CONSULTANT ROLE

The professor and consultant are the students' teachers, supervisors, guides, motivators, and colleagues in learning. They will provide enough structure to this experience so that the students accomplish their objectives, while simultaneously supporting flexibility and creativity.

TEAM CONDUCT

Since the class is treated as one self-organized Scrum team, each member is expected to contribute actively and constructively to the team and project. Equity and parity of work roles and responsibilities in the team are important ingredients of working in a collaborative project. Part of the learning that occurs in this class is learning about teams and team processes, so take full advantage of the opportunity to develop your skills as an effective team participant.

Over the course of the semester, each team member will be asked multiple times to assess the relative contribution and performance of other team members. In the case of substantive unequal contributions, the professor will determine an appropriate course of action (e.g., removal of team member(s) from the class, unequal allocation of final grades, etc.). If you feel your team (or sub-team) is not working effectively, it is far better to handle the problem as it arises within the team rather than waiting for an external assessment.

STUDENTS' ROLE

Class meetings will be working sessions, devoted to discussion and practice of concepts and techniques of systems development, using tools that are at your disposal. Instead of passive absorption of wisdom handed down by the professor and fellow students, each student has to prepare for active involvement in the topic to be mastered at each class meeting. Students must expect to learn from peers and provide learning to them, as well as from and to the professor. The minutes of the previous meeting, the agenda for the current meeting and any documents that will be discussed at the weekly class meeting must be distributed to everyone (team members, professor, and project consultant).

All these other components come down to one thing and that is **you**. If you do not invest *yourself* in what we are doing, then we all lose. You must be present not only physically, but also mentally and emotionally. Being present mentally means being prepared for every class meeting. Being present emotionally means caring about what you do—and showing it in your work. Your role is to participate and actively engage in the class at all levels.

In particular, you are responsible for the following:
- Organizing weekly project meetings
- Organizing yourselves into smaller project groups
- Assuming the role of project meeting chair and secretary
- As chair, with scrum master, preparing the weekly agenda, including goals
- As chair and secretary, communicating with the professor before class
- Reporting and presenting your project group's work, including design artifacts.
- Evaluating peers
- Preparing and present intermediate updates and deliverables on the project
- Preparing and presenting the final design of the information system to the problem owner and other interested parties.

GRADING

Your final grade is based on the percentage of points that you receive out of the total possible points for the course. Grades are assigned by the professor based on her judgment of your work and the performance of the team. In this sense, all grading is subjective. Students receiving a C+ or lower will have to retake the course.

The tables below show the grading components and grading scale for this course.

COMPONENT	PERCENTAGE
Product Prototype Demos	25%
Final Prototype	10%
Final Presentation	10%
Project Documentation	10%
Peer Review	20%
Individual Assessment	15%
Meeting Secretary/Meeting Chair	10%
Total	**100%**

GRADE	POINT RANGE
A	93% or higher
A-	90% <= x <= 92%
B+	87% <= x <= 89%
B	83% <= x <= 86%
B-	80% <= x <= 82%
C+	77% <= x <= 79%
C	73% <= x <= 76%
C-	70% <= x <= 72%
D+	67% <= x <= 69%
D	63% <= x <= 66%
D-	60% <= x <= 62%
F	59% or lower

The following describes each of the grading components. Detailed grading guidelines are provided in this document. Use the guidelines to help you prepare for each deliverable.

PRODUCT PROTOTYPE DEMOS

Product prototype demos will occur at the conclusion of each sprint (approximately every 3 weeks) with the client. The client liaison/product owner is required to work with the client to determine which identified items are of highest priority. The client liaison/product owner will then work with the project team to determine which items can be delivered in the next sprint/iteration.

The team will arrange product prototype demo meetings with the client and professor during the semester. The purpose of the product prototype demos is to demonstrate functionality as requested by the client and agreed upon by the project team. Prior to the product prototype demo with the client, the client should receive information regarding what to expect during the demonstration.

Following each product prototype demo, the client will provide feedback which may include change requests, reprioritization of existing requirements, or introduction of new requirements. The client will be evaluating the product prototype demo, and this will be part of the grading criteria for this assignment.

The following table is a guideline for the assignment of grades for each product prototype demo; however, the professor has the discretion to include additional criteria as required.

Grade	Requirements
A	To receive an "A," each of the criteria must be met throughout the semester: • No application functionality errors during demos for the client (NOTE: All features should be tested and validated prior to demos) • Single voice for the team during demos unless the presenter asks for support from a specific member of the team • At least 90% features in the demo match agreed upon requirements for the current sprint • Client evaluations of demos are rated higher than 90%
B	• Minor application functionality errors during product demos for the client • Generally, a single voice is present for the team during demos, but the speaker has to rely on additional support from the team for minor questions • 80-90% of the features in the demo match agreed upon requirements for the current sprint • Client evaluations of demos are rated between 80% - 90%
C	• Multiple application functionality errors during demos • Multiple speakers during demos revealing lack of team coordination • Demoed features do not match agreed upon requirements for the current sprint and/or are less than 80% of the agreed upon requirements • Client evaluations of demos are rated less than 80%

FINAL PRODUCT PROTOTYPE

The final product prototype is the primary deliverable for the capstone course. The final product should match the client's requirements based on what the team and client agreed to deliver over the course of the semester.

The following table identifies the guidelines for the assignment of grades for the final prototype; however, the professor has the discretion to include additional criteria as required.

Grade	Requirements
A	To receive an "A," each of the criteria must be met throughout the semester: • No application functionality errors • Final product matches at least 90% of the agreed upon requirements • Client evaluations of final prototype is greater than 90%
B	• Minor application functionality errors • Final product matches 80 - 90% of the agreed upon requirements • Client evaluations final prototype is rated 80% - 90%
C	• Multiple application functionality errors • Final product matches less than 80% of the agreed upon requirements • Client evaluations of the final product is rated less than 80%

FINAL PRESENTATION

The final presentation is an opportunity for the Capstone students to show their final product to an audience including client representatives, UNO IS&T faculty, friends, and family.

The following table identifies the guidelines for the assignment of grades for the final presentation, however, the professor has the discretion to include additional criteria as required.

Grade	Requirements
A	To receive an "A," each of the criteria must be met: **Final Presentation Preparation** • The Final Presentation preparation checklist (below) is completed according to the guidelines. **Final Presentation Content** • Presentation provides appropriate context of the organization problem • Presentation appropriately explains the solution developed to address the organization's need • All points are developed with organization, clarity, and detail • Sources of supporting material are appropriately cited • Smooth transitions and signposts between main points and among speakers **Final Presentation Delivery** • Presenters gained and maintained interest of audience • Audience was prepared for presentation content through the use of an agenda and/or preview of main points • Effective use of visual aids (i.e., PowerPoint) to support the presentation as needed • Presentation style was effective with sustained eye contact with the audience, proper vocal rate with variety, pauses, projection, & pronunciation, and suitable facial expression, gestures, and animation • Students dressed in business professional attire • Entire group remained professional throughout the presentation
B	**Final Presentation Preparation** • The Final Presentation preparation checklist (below) is completed according to the guidelines with minor deviations. **Final Presentation Content** • Presentation explains context of the organization problem, but more detail is needed to fully understand the need • Presentation explains the solution developed to address the organization's need but needs further clarification • Most points are developed with organization, clarity, and detail • Sources of supporting material are usually cited • Minor issues with transitions between main points and among speakers **Final Presentation Delivery** • Presenters made an attempt to gain and maintain interest of audience • Audience had some preparation for presentation content through the use of an agenda and/or preview of main points • Use of visual aids (i.e., PowerPoint) to support the presentation was adequate but needed some improvement • Presentation style was generally effective, but had issues with one or more of the following: sustained eye contact with the audience, proper vocal rate with variety, pauses, projection, & pronunciation, and suitable facial expression, gestures, and animation • Nearly all students dressed in business professional attire • Most of the group remained professional throughout the presentation

Grade	Requirements
C	**Final Presentation Preparation** - The Final Presentation preparation checklist (below) is not completed according to the guidelines. **Final Presentation Content** - Presentation does not explain the context of the organization's problem or does so with little detail - Presentation does not explain the solution developed to address the organization's need - Points lack organization, clarity, and detail - Sources of supporting material are not cited - No transitions and signposts between main points and among speakers **Final Presentation Delivery** - Presenters did not attempt to gain or maintain interest of audience - Audience was not prepared for presentation content through the use of an agenda and/or preview of main points - Use of visual aids (i.e., PowerPoint) to support the presentation was ineffective - Presentation style was ineffective by lacking one or more of the following: sustained eye contact with the audience, proper vocal rate with variety, pauses, projection, & pronunciation, and suitable facial expression, gestures, and animation - Few students dressed in business professional attire - Many members of the group failed to remain professional throughout the presentation

FINAL PRESENTATION PREPARATION CHECKLIST GUIDELINES

- 10 Weeks Before Final Presentation
  - Date/Time Identified and Confirmed with Professor, Project Consultant, and Client
  - Venue Booked
  - Preliminary Budget
  - Invitation List
- 6 Weeks Before Final Presentation
  - Budget Identified
  - Funding Plan Created
- 4 Weeks Before Final Presentations
  - Invitations Sent
- 3 Weeks Before Final Presentation
  - All Funding Finalized
- Week Before Final Presentation
  - Invitees Confirmed
  - Presentation Dry Run

PROJECT DOCUMENTATION

Throughout the project, multiple documents will be created, such as a statement of work, final report, user manual, and technical manual.

The final report, user manual, and technical manuals will be delivered to the client in hard copy (printed and bound) and soft copy. The purpose of these documents is to describe, in detail, the resource, timing and infrastructure requirements to deliver the final product. ***Any plagiarism will result in an automatic FAILING grade for all capstone students.***

The following table identifies the guidelines for the assignment of grades for the final report; however, the professor has the discretion to include additional criteria as required.

Grade	Requirements
A	To receive an "A," each of the following criteria must be met: • Drafts submitted on time • Drafts submitted with requested level of completion (50%, 75%, 100%) • Free of grammatical errors • Complete description of the project and product prototype delivery requirements • Includes a complete list of all references
B	• Drafts submitted not more than one day late • Drafts submitted with a 10% deviation from the requested levels of completion • Minor grammatical errors present throughout the document • The description of the project and product prototype delivery requirements are generally complete with some minor missing information • References are inconsistently formatted
C	• Drafts submitted more than two days late (10% penalty per day the assignment is late) • Drafts submitted with less than requested levels of completion (50%, 75%, 100%) • Grammatical errors present throughout the document • Incomplete description of the project and product prototype delivery requirements • Incomplete list of references

PEER REVIEW

At regular intervals, students will be evaluated by members of the capstone team. The purpose of these assessments is for students to receive feedback from other members of the team to understand areas where they can improve.

The following table identifies the guidelines for the assignment of grades for the peer review grading component; however, the professor has the discretion to include additional criteria as required.

Grade	Requirements
A	• Average peer review grade of A (includes overall grade and comments) • When rating one's peers, the comments and assessment of one's peers are complete, thoughtful, and constructive.
B	• Average peer review score of B (includes overall grade and comments) • When rating one's peers, some of the evaluations of one's peers are carefully assessed with thoughtful and constructive comments while others lack detail OR all students are assessed, but the explanation of the review needs more detail.
C	• Average peer review score of C (includes overall grade and comments) • When rating one's peers, all students are graded identically and/or include little to no thoughtful or constructive comments.

INDIVIDUAL ASSESSMENT

At regular intervals during the semester, each student's performance in the course will be evaluated. Students will receive feedback on each attitude, collaboration, attendance and participation.

The following table identifies the guidelines for the assignment of grades for the individual assessment; however, the professor has the discretion to include additional criteria as required.

Grade	Requirements
A	To receive an "A," each of the criteria must be met: • Student has missed no classes or team meetings without making arrangements prior to the planned absence • Student seeks support from teammates when help is required • Student escalates issues unresolved at the team level to capstone professors • Student offers to help teammates when asked and if available to assist
B	• Student misses one class or team meeting without making arrangements prior to the planned absence • Student delays to seek support from teammates when help is required • Student delays to escalate issues unresolved at the team level to capstone professors • Student delays to help teammates when asked
C	• Student misses more than two classes or team meetings without making prior arrangements with capstone professors or team leads • Student does not seek support from teammates when help is required • Student does not escalate unresolved issues to capstone issues • Student does not offer to assist teammates when available

MEETING SECRETARY

As a secretary, it is your responsibility to take note of any decisions made during the team meeting, recap those decisions at the end of the meeting and distribute team meeting notes to the team including the capstone professors by 11:59pm on day following each team meeting.

The following table identifies the guidelines for the assignment of grades for the meeting secretary; however, the professor has the discretion to include additional criteria as required.

Grade	Requirements
A	To receive an "A," each of the criteria must be met: • Immediately following the last item on the agenda, the secretary provides a complete summary of the meeting to the project team including action items, owners and any decisions made to team input prior to distributing meeting • Sends meeting notes to project team by 11:59pm on the day following the team meeting
B	• Immediately following the last item on the agenda, the secretary provides an incomplete summary of the meeting to the project team (missing action items, unknown/unidentified task owners and missing decisions made during the meeting, if applicable) • Sends meeting notes to project team two days following the team meeting
C	• Immediately following the last item on the agenda, the secretary cannot provide a summary of action items, owners and any decisions made during the meeting, if applicable • Sends meeting notes to project team more than two days following the team meeting

MEETING CHAIR

As a meeting chair, it is your responsibility to lead the team discussion and keep everyone on track with the evening's agenda. Additionally, you are required to submit the weekly team meeting agenda to the capstone professors for approval two days before each class. You must also distribute the approved version of the current week's meeting agenda to all meeting attendees by noon on the day of each team meeting.

The following table identifies the guidelines for the assignment of grades for the meeting chair; however, the professor has the discretion to include additional criteria as required.

Grade	Requirements
A	To receive an "A," each of the criteria must be met: • Reaches out to team members for meeting agenda input prior to submitting final agenda to professors • Sends meeting agenda to capstone professors for approval on Tuesday at 6pm before the team meeting • Follows the agenda during the team meeting • Keeps all participants on track
B	• Reaches out to team members for meeting agenda input prior to submitting final agenda to professors • Sends meeting agenda to capstone professors for approval by Wednesday at 6pm before the team meeting • Makes minor deviations to the agenda during the team meeting • Generally keeps participants on track, but allows some minor extraneous discussion during the meeting
C	• Does not reach out to team members for meeting agenda input prior to submitting final agenda to professors • Does not send meeting agenda to capstone professors for approval until after 6pm on the Wednesday before the team meeting • Does not follow the agenda during the team meeting • Does not keep all participants on track

GENERAL COURSE POLICIES

This course will be conducted in a manner consistent with official policies of the University of Nebraska at Omaha and in a spirit of professionalism and integrity. Please read and follow the Student Code of Conduct at http://studentaffairs.unomaha.edu/studentcode.php. In addition, the following points deserve special emphasis.

DISABILITIES

Accommodations are provided for students with verified disabilities. For more information, contact Services for Students with Disabilities (SSD) in EAB 117 or 554-2872, TTY 554-3799.

PLAGIARISM

Webster's Third New International Dictionary defines plagiarism as passing off the ideas or words of another person as one's own, and/or using a created production without crediting the source. Plagiarism is ethically and legally wrong, and it will not be tolerated in any form. Be aware that you must cite your web sources just as you would sources from printed material.

If you copy material verbatim from any source, including web sources, you must put quotation marks around the verbatim material and provide a citation to its source. Merely changing a word or two, so that the material is no longer verbatim, is not enough to make those ideas your own. **YOU MUST ALWAYS CITE THE SOURCE**. The style manuals of both the American Psychological Association (APA) and the Modern Language Association (MLA) offer extensive guidelines on quotations and paraphrases.

When you paraphrase someone's work, you are not relieved of the responsibility to credit that person. But simply paraphrasing other people's work and ideas is not sufficient for a passing grade on your work. You typically will be building on existing ideas and showing your knowledge of existing literature. But you must go beyond mere description of what is already known to develop and present your own ideas. You must integrate, extend, and ultimately go beyond other people's ideas to your own.

ADDITIONAL RESOURCES

The **UNO Writing Center** provides free consulting services to UNO students. Writing Consultants can help you with your writing assignments and projects. Consultation can be valuable at any stage during the writing project, whether you are starting to gather ideas for writing or nearly finished with a final draft. Make an appointment by visiting the Writing Center web site (http://www.unomaha.edu/writingcenter) or stop by ASH 150.

The **UNO** Speech Center offers free consulting and coaching services for UNO students of all majors in an effort to support effective presentational skills. Sessions are by appointment only and can be made in ASH 185 or by calling 554-3201.

CAPSTONE MEETING AND DELIVERABLES SCHEDULE

WEEKLY ITEMS

- Sunday by 11:59pm:
  - Tentative Weekly Meeting Agenda emailed to professor and consultant from the current week's Chair with input from the team.
- Tuesday by Noon:
  - Final Weekly Meeting Agenda emailed to the professor, consultant, and class by the current week's Chair. This document should also be posted to the group's collaboration website.
- Wednesday by 11:59pm:
  - Weekly Meeting Minutes from the current week's secretary to be submitted to group via email and posted on collaboration website.
- Friday by 11:59pm:
  - Project Status Report sent via email from the Scrum Master with input from the Project Manager, Technology Lead, QA Lead, Documentation Lead and Client Liaison to the professor and consultant.
  - Peer Evaluations

DELIVERABLE SCHEDULE

This course will have a cycle based on the sprint dates as determined by the project team. It is expected that there will be a Sprint 0 as well as 3-4 additional sprints. Sprints should last 2-4 weeks as determined by the team and with approval of the professor. There will be deliverables that are required at the end of each sprint.

Sprint #	Group Deliverables	Individual Deliverables
0	- Statement of Work* - Group Organization - Product Backlog - Communication Plan - System Development Environment - Business Process Model (current and future state)	- Personal Reflection (due Tuesday at 6pm) - Peer Evaluations (due Friday at 11:59pm after Sprint)
1	Prototype*	- Personal Reflection (due Tuesday at 6pm) - Peer Evaluations (due Friday at 11:59pm after Sprint)
2 - (n-1)	- Prototype* - Documentation - Draft - User Manual - Technical Manual - Final Report - Presentation - Presentation Slide Deck – Draft - Arrangements Update	- Personal Reflection (due Tuesday at 6pm) - Peer Evaluations (due Friday at 11:59pm after Sprint)
n	- Final Prototype* - Final Presentation* - Documentation* - User Manual - Technical Manual - Final Report - Project Sign-Off with Client*	Personal Reflection (due at time of final presentation)

*Denotes deliverables to be shared with client in person