University of Nebraska Omaha

COURSE: ISQA 8210 Managing Software Development
SESSION: Fall 2012
TIME: Tuesday Nights from 6PM to 8:40PM.
PLACE: PKI 252
INSTRUCTOR: Dr. George Royce
OFFICE: Room 367
OFFICE HOURS: Before or after class by appointment and regularly my hours are 5-6 PM on Friday afternoons and 10-12 Saturday mornings (my website http://roycesite.com/george for any changes in these office hours).
E-Mail   george.royce@gmail.com
PHONE and IM: Home: 402-216-0414 leave a voice message if I am not there. Cell phone is 402-871-9675 if urgent. You can also connect with Skype: gkroyce, and gtalk or my gmail. I also use Microsoft IM (george.royce@live.com). I prefer IM over email if you are comfortable with IM but email is acceptable. For email, please use my gmail account.

Course Description:

Great software offers the ability to delight your customers and even create a competitive advantage. While many companies purchase off the shelf software or cloud services to enable the routine processes, strategic processes and systems that differentiate company are often developed. These projects are important to the companies investing in them. This course should encourage you to think critically about aspects of software development that make it difficult and strategies to mitigate these challenges. This course integrates concepts from software engineering, management science, psychology, and organizational behavior to identify, understand, and propose solutions to problems associated with software development. We examine and consider issues from various perspectives, such as the project manager, development team, senior management, and project sponsor. This course prepares students for various roles within a software development effort including leadership positions in software development.

Objectives:

After taking this course you will, among other things, be able to:

- Identify the challenges related to successfully managing software development
- Understand the considerations when selecting software projects to pursue within the organization
- Articulate the trade-offs and considerations when making choices related to planning and executing software development projects
- Identify alternative approaches to managing software development projects
- Articulate potential success factors for software development projects
- Gain a basic understanding of Agile/SCRUM and be able to contrast with other methodologies
- Identify and practice techniques to elicit business process software requirements

- Identify and practice human change management techniques needed for the successful adoption of new software

Text:

Agile Software Requirements – Lean Requirements Practices for Teams, Programs and the Enterprise by Dean Leffingwell, 2011. ISBN 978-0-321-63584-6.

Switch: How to Change Things When Change Is Hard by Chip and Dan Heath, 2010. ISBN-13: 978-0385528757. (Consider ordering the audio book if you are an audio learner).

Most cases are available via Blackboard. Additional cases and readings are in the Digital Course Pack available from Harvard Business Review.

Grading:

Activity	Points	Date Due
Class discussion, participation in blackboard forums and answers to questions for virtual classes.	100	Ongoing
Assignment 1 – Complete Student Information Sheet	20	August 24th
Assignment 2 – Plagiarism Assignment	20	September 3rd
Assignment 3 – Case Study Presentation	70	September 10th
Assignment 4 – Process requirements techniques - Kaizen Event Charter and supporting materials	90	October 1st
Assignment 5 – Switch Change Management Questions and Discussion	30	October 22nd
Assignment 6 – Group Project – Eagle Financial Services Mobile Retail Banking Application Project	160	November 20th
Assignment 7 – Harvard Review Project Simulation	110	December 3rd
1st Exam	200	October 9th
2nd Exam	200	Dec 11th
Total	1,000	

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Points	Grade
97-100%	A+
93-96%	A
90-92%	A-
87-89%	B+
83-86%	B
80-82%	B-
77-79%	C+
73-76%	C
70-72%	C-
67-69%	D+
63-66%	D

60-62%	D-

Plagerism Assignment

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. **If you plagiarize any material on any assignment, you will receive a failing grade for the course or the assignment.** To ensure that every student understands what plagiarism is and what it is not, you must complete Plagiarism Assignment posted on Blackboard. This will consist of reading a brochure discussing plagiarism, taking a plagiarism quiz, and signing a statement that discusses plagiarism and its implications. You must complete this assignment by the third week of class to receive full credit for the assignment. **No other assignments will be graded until you complete the plagiarism assessment.**

Course Policies

Academic Dishonesty 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.

Cheating

Most students are well aware of the fact that asking for assistance or using non-sanctioned materials for an in-class, closed book exam is cheating. However, the use of non-approved resources on homework or other class assignments is also considered cheating. Asking for and receiving help for an individual assignment from a fellow classmate, friend, or other person (whether they are in the class or not) is considered cheating and will result in a **failing grade for the assignment or the course**. An individual assignment is a reflection of your knowledge and understanding, not the knowledge and understanding of you *and* your peers.

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, http://avalon.unomaha.edu/disability/.

Late Assignments, Make-ups, and Incompletes

You are expected to turn in all assignments on time. The nature of this class is that you learn how difficult it is to complete software development (or other types of projects) within scope, on

budget, and *on time!* Plan ahead and be prepared to turn in your assignments promptly. Late assignments will therefore receive a penalty of 10% per day. Make-ups for in-class activities and exams are given only in extreme or unexpected circumstances and must be discussed with the instructor. Incomplete grades will not be given unless there are extraordinary circumstances, as determined by the instructor.

Missed Class

Circumstances can arise that may cause you to miss class. If you miss class, please seek out notes from a fellow classmate and review the video from the class. The burden is first on you to obtain the material you missed. After getting notes from a classmate, you are then welcome to make an appointment with me to go over specific questions you have about the material you missed, but do not assume this will be a private offering of the class you missed.

Safe Assign

SafeAssign (SA) is a tool that can help you determine if you have properly paraphrased and quoted material in your assignments. By checking your work through SafeAssign, you can better understand plagiarism and help protect yourself against inadvertent plagiarism.

SafeAssign provides a report for both you and the instructor that identifies *possible* plagiarized segments of your work. SafeAssign will sometimes give "false positives" meaning that sentences that are similar in structure to other sentences within their library, but on a different topic, will be highlighted as a potential plagiarized sentence. As an instructor, I look at your entire assignment, the report from SafeAssign, as well as the original quotation. I do not take the report offered by SafeAssign at face value. If you submit a paper via SafeAssign and have questions about the report, please do not hesitate to ask. Furthermore, SafeAssign assigns a score of the percentage of the paper that is plagiarized. Please note that I do not use this percentage to determine plagiarism. A paper with a high percentage may have no plagiarism issues whatsoever. A paper with a low percentage (even 0%) may 5

have passages that are plagiarized. Any amount of plagiarism is unacceptable and will be addressed using the plagiarism policy discussed in class, in the syllabus, and within the plagiarism statement signed by you.

Course Schedule:

You are responsible for any schedule changes posted in Blackboard (BB) Announcements. All lectures are accessible via the Web at the URL posted in the BB site each week.

Date	Topics	Assignments Due
Class 1 Tuesday August 21st	**Topics** 1.1 Introductions 1.2 What makes software development difficult? 1.3 Challenges of software development and methodologies used to address challenges 1.4 Lean IT and Initial Overview of Agile Scrum	**Due by end of first week of semester:** **Read:** Leffingwell Chapter 1 **Do:** Complete student information sheet and work on assignments 1 and 2 **Submit:** Student Information Sheet, **Due by:** Friday August 24
Class 2 Tuesday August 28th	**Topics** 2.1 Overview of program and project processes 2.2 Comparing Agile and Traditional Project Management 2.3 Overview of Agile Part 2 with activities 2.4 Estimation and Story Pointing	**During this week:** **Read:** Leffingwell Chapter 2 – 4 and Chapter 11 **Do:** Complete student information sheet and work on assignments 1 and 2 **Submit:** Plagerism Assignment due by Monday, September 3rd at 11 PM
Class 3	**Topics**	**During this week:**

Tuesday September 4th	3.1 Agile Estimating and Velocity 3.2 Building a Release Plan 3.3Monitoring and Tracking Agile Projects – Project Metrics 3.4 Managing the Backlog in an Agile project	**Read:** Leffingwell Chapter 5 - 8 **Do:** Work on Assignment 2, need to discuss and present next week **Submit:** Case Study Assignment due by Monday, September 10th at 11 PM. Present in class on the 11th
Class 4 Tuesday September 11th	**Topics** 4.1 Acceptance testing and Test Driven Development 4.2 Requirements elicitation using Kaizen	**During this week:** **Read:** Leffingwell Chapter 9-10 **Do:** Work on Kaizen Assignment
Class 5 Tuesday September 18th	**Topics** 5.1 Project Management Case Study discussion and presentations 5.2 Requirements Discovery Toolkit 5.3 Prototyping Tools to develop mock-ups	**During this week:** **Read:** Leffingwell Chapter 12

Do: Work on Kaizen Assignment

Date	Topics and Lectures	Assignments Due
Class 6 Tuesday September 25th	**Topics** 6.1 Problem Identification, Project Selection 6.2 Vision, Features and Roadmap for a program 6.2 The CBA and the TCO 6.3 Charters	**During this week:** **Read:** Leffingwell Chapter 13 **Do:** Work on Kaizen Assignment **Submit:** Kaizen Assignment due by Monday, October 1st at 11 PM.
Class 7 Tuesday October 2nd	**Topics** 7.1 RFI / RFP 7.2 Kanban and WIP limits 7.3 Training project sponsors and product owners	**During this week:** **Read:** Chapter 21, Switch Chapters 1-4 **Do:** Prepare for test 1
Class 8 Tuesday October 9th	**Topics** 8.1 Test 1	**During this week:** **Read:** Switch Chapters 5-10 **Do:** Complete Switch Q & A Assignment **Submit:** Q&A on Switch Assignment on Monday, October 22nd at 11 PM. Be ready to discuss in Class 9
October 16th	**Spring Break**	
Class 9 Tuesday October 23rd	**Topics** 9.1 Human Change Management 9.2 Project Change Management Planning 9.3 Project Communication Planning	**During this week:** **Do:** Work on Eagle Financial Project Proposal Assignment and Harvard Business Project Simulation Assignment
Class 10 Tuesday October 30th	**Topics** 10.1 Project Organization for a software development project	**During this week:** **Do:** Work on Eagle Financial Project Proposal Assignment and Harvard Business Project Simulation Assignment
Class 11 Tuesday November 6th	**Topics** 11.1 Software Development Risk and How to Mitigate	**During this week:** **Read:** **Do:** Work on Eagle Financial Project

	Risk	Proposal Assignment and Harvard Business Project Simulation Assignment
Class 12 **Tuesday November 13th**	**Topics** 12.1 Software project Metrics and Success Measure	**During this week:** **Submit:** Eagle Financial Project Proposals Assignment due by Monday, November 20th at 11 PM.
Class 13 **Tuesday November 20th**	**Topics** 13.1 Teams Present Eagle Financial Project Proposals Assignment 13.2 Leadership	**During this week:** **Do:** Harvard Business Project Simulation
Class 14 **Tuesday November 27th**	**Topics** 14.1 Managing Virtual Projects	**During this week:** **Do:** Harvard Business Project Simulation **Submit:** Harvard Business Review project Simulation Assignment Monday, December 3rd at 11 PM.
Class 15 **Tuesday December 4th**	**Topics** 15.1Learning from Projects 15.2 Continuous Improvement	**During this week:** **Do:** Prepare for test 2
Class 16 **Tuesday December 11th**	16.1 Test 2	**During this week:**