MGS 614
Systems Analysis and Design
Spring 2014

General Course Information

Instructor: Rajarshi Chakraborty

Office: 302 Alfiero Center, School of Management
Office Hours: Mondays and Wednesdays, 5pm ~ 7pm
Classroom: Alfiero 104

E-mail: mgs614spring2014@gmail.com
Web Site: UBlearns (http://ublearns.buffalo.edu)


Course Objectives
This course is intended to give students a solid foundation in systems analysis and design using an object-oriented approach. In short, this course will teach students to employ object-oriented techniques to develop software-based information systems that solve real-life business problems.

Specific topic coverage includes:
• The World of the Modern Systems Analyst
• Object-Oriented Development and the Unified Process
• The Inception Phase
• Business Modeling and Requirements Activities
• Use Cases and Domain Models
• Use Case Modeling
• Design Activities and Environments
• Use Case Realization in an Iteration
• Advanced Design Principles and Patterns
• Designing the Data Access Layer
• Designing the User Interface Layer
• Designing System Interfaces, Controls, and Security
• Making the System Operational

Web Site and Class Materials
Supplementary information for the course is available at http://ublearns.buffalo.edu. The Web site contains class notes, PowerPoint slides, class announcements, the course syllabus, test dates, and other information for the course.

E-Mail

All students are requested to obtain an e-mail account. If you have any questions about the course or need assistance, please contact me in person or by telephone (716-645-5254) during office hours; or by e-mail (rc53@buffalo.edu) at any time. Also, you must submit all assignments and project-related deliverables by e-mail with a date stamp of 11:59PM on the due date. Unless otherwise specified, email submissions should be sent as an attachment in Microsoft Word format to mgs405spring2013.ub@gmail.com with the subject line starting with MGS 405.

Course structure

This course will have a simple structure consisting of the following:

- Lectures
- Assignments
- Midterm Exams
- Term Project

This course will follow an active-learning structure. That means for most classes the lecture portion will be brief followed by in-class work on assignments. Project work may be done in class if no assignment is pending. This requires each student to bring a laptop to every class.

Lectures will be accompanied by PowerPoint slides which will be posted the day before the respective classes.

Assignments will be posted after a class where a chapter is finished (usually the Thursday of each week). Each assignment will be due in 1 week from the date of assignment. Late submissions will suffer a 5% deduction for each extra day. The assignments will mostly be select questions from two case studies for each chapter. All assignments will be due by 11:59PM of the due date. ONLY SOFT-COPY of assignment should be submitted as email attachment to mgs405spring2013.ub@gmail.com with subject line starting with “MGS 405 Assignment <Assignment #>”. Microsoft Word is the preferred word processing software for writing reports – any required screenshot will have to be copied and pasted in these reports. Any other format of deliverable will be specifically mentioned in the assignment instructions.

Assignments and Project will be team-based. No more than 5 members can be in one team. See section on Peer Evaluation below.

Project

The project for this class shall require you to incorporate different aspects of object-oriented systems design and analysis covered in the class for a company that leverages the Web, location and mobility of consumers for its products as well as its own business processes. It should look like a collection of case studies along with solutions about the same company pertaining to certain design and analysis concepts much like the Rocky Mountain Outfitters case in the book.
More details along with milestones and their dates will be given in the next couple of weeks in class. The project will carry a significant load (see grading distribution below). The final deliverable will have to be an elaborately documented project report. Please see the “Project Description” document on UBlearns posted in the Assignments section for all the details. 

No project presentation is needed.

**Exams (10% + 10%)** will not be cumulative. They will test your command on the material covered in the lecture and assignments. The best way to prepare for the exams will be to read the slides, attend all the classes, do all the assignments and practice diligently. **The exams will only consist of multiple-choice / true-false / fill-the-blanks types of questions and will have to be taken online but in class on your respective laptops.**

**Peer Evaluation**

Each student shall be evaluated at the end of the semester by the rest of her/his fellow team members based on the performance both in the assignments and the project. More details about this process shall be given later in class.

**Class Attendance**

Attendance is mandatory and will be recorded at the end of each class. Prior written permission for unavoidable circumstances is the best way to avoid attendance penalty. There will be class attendance points towards the final letter grade. Each day’s attendance will be worth 2 points.

**Grading and Evaluation Criteria**

Assignments: 30%

Exam: 20% (10% + 10%)

Project: 40%

Attendance: 5%

Peer Evaluation: 5%

**Letter Grade Scheme**

> 95%: A | 90 ~ 95%: A- | 85 ~ 90%: B+ | 80 ~ 85%: B | 75 ~ 80%: B- | 70 ~ 75%: C | < 70%: F

**Course Schedule**

<table>
<thead>
<tr>
<th>Week**</th>
<th>Topics</th>
<th>Chapter Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The World of the Modern Systems Analyst</td>
<td>Chapter 1</td>
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</tbody>
</table>
Object-Oriented Development and the Unified Process

Chapter 2

The Inception Phase

Chapter 3

The Requirements Discipline

Chapter 4

Use Cases and Domain Classes

Chapter 5

Use Case Modeling and Detailed Requirements

Chapter 6

Design Activities and Environments

Chapter 7

Use Case Realization: The Design Discipline within UP Iterations

Chapter 8

Advanced Topics in Object-Oriented Design

Chapter 9

Designing the Data Access Layer

Chapter 10

Designing the User-Interface Layer

Chapter 11

Designing System Interfaces, Controls, and Security

Chapter 12

Making the System Operational

Chapter 13

Current Trends in System Development

Chapter 14

* Tentative
** Week 1 starts on Jan 15 (first class) and Week 14 ends with April 25 (last class)

Important Dates:

Assignments – will be notified in class and through UBlerns
Midterm 1 – February 28 (Thursday), 2013
Midterm 2 – April 25 (Thursday), 2013
Project Milestone 1 – January 31, 2013 (11:59pm)
Project Milestone 2 – February 28, 2013 (11:59pm)
Project Milestone 3 – March 28, 2013 (11:59pm)
Prototype Demo – April 29, 2013 (11:59pm)
Final Project Report – May 3, 2013 (11:59pm)

Academic Integrity and Honesty:

As clearly stated in the undergraduate student handbook (http://mgt.buffalo.edu/programs/undergrad/handbooks/handbook), faculty members, students, and staff all have an obligation to each other to maintain high personal standards of integrity and to expect high standards of integrity from each other, for the reputation of the School of Management is derived from the performance of all its members, and faculty, students, and staff all have an obligation to be aware of their own and one another’s rights and responsibilities with respect to matters involving academic integrity and to insist on the observance of these rights and responsibilities, we must insist upon making every effort to maintain the standards of academic integrity and honesty. (Please refer to your student handbook for details.)

Warning:
You shall be given an F grade in this class if you are caught doing any one of the following:
  * Cheating for project/assignment ideas and diagrams from another team.
• Deliberate lifting of diagrams and project ideas from any source without attribution.
• Plagiarism in project report (see project description document on UBlearns).
• Using someone else’s screencast video for demo.