Information Systems Analysis (IST654)

Class Information

Class Title: Information Systems Analysis
Class Code and Semester: IST654; Summer 2016; May 16 – May 20
Prerequisite / Co-requisite: None
Class Credits: 3 Credits
Instructor: Ehsan Sabaghian, PhD Student at iSchool at Syracuse University
Class Meeting Day and Time: MTuWThF, 9 a.m. - 5 p.m.
Class Meeting Place: Hinds Hall, 018
Learning Management System (LMS): http://blackboard.syr.edu
Required Application: Microsoft Visio
Office Hours: 30 minutes after class at iCafe and by appointments
E-mail: esabaghi@syr.edu
Twitter: @EhsanSabaghian
Class Hashtag: #IST654

Class Catalog

IST654 offers concepts and methods of systems analysis through decomposition and modeling, extensive practice with structured and unstructured methodologies, systems analysis and project management techniques, introduction to automated tools and technologies and group project to apply skills and techniques.

Narrative Description

Organizations, at all scales and all formats, continue to adopt information and communication technologies (ICTs) to support their strategic goals, and improve work processes. New ICT technologies (in many forms and with different affordances) are being adopted by companies to create market competitive advantage and to support internal operations. More than ever, organizations are in need those who have the knowledge and skills to analyze, design and lead the information system domain and those who can make critical decisions during the process of system development. Organizations required experts who have the knowledge and skill to link business side and IT side of the information systems analysis, design and development in specific context. IST654 offers those knowledge and skills.
Learning Objectives

Students, who finish this course successfully, will be able to:

- Understand and describe information System Development Life-Cycle (SDLC)
- Analyze and design information systems aligned with business strategies
- Learn about system development methodologies and modelling languages techniques
- Design and model systems based on Object-Oriented Design (OOD) approach
- Understand and identify system requirements process and techniques
- Design the business requirement process and develop system business requirements documents
- Understand use-case modelling and apply use diagrams in business case
- Learn about system design, architecture and system feasibility analysis
- Understand domain modeling analysis using ERD and data modelling techniques using DFD
- Comprehend user-interface design and prototyping tools and techniques
- Understand information systems project management concepts and applied techniques using PMBOK

Upon completing this course, students will be able to analysis, evaluate and design business information systems using modeling language and techniques and apply that knowledge in a real-life project. They will be able to apply different tools and techniques as system analysis. Beside, students will be introduced to latest research topic in information systems field as a special topic of each session.

Structure of the Course

In this blended-learning course you will:

a) Learn about Information System Analysis and Design and what it means to be a system analyst in a global enterprise, what the responsibilities are, and what are the required knowledge and skills to be successful in real-world work experiences.

b) Learn by being part of a Group Project, which brings together students and professional into a real-life project that helps students to apply lesson learned in the class.

Class has been designed in a way to blend theoretical knowledge of information systems theories with real-life practices and give students knowledge, skills and tools to be a successful as information system analyst in highly competitive industries and be armed them with competitive skills in job market.

Course will have 6 major components;

1. Class Lectures; which covers the concepts aspects of information system analysis and design.
2. Tools | Techniques; in each session, alongside the class lecture, students will be presented to a tool or a technique that can be applied in real-life work experience. Students will have class activities to learn about that tool by using it in individual and group assignments.
3. Special Theme; at the end of each session, students will be in introduced to a new research area topic in information systems field.
4. Group Project; students form a group and conduct a semester-long project applying class lesson-learned into a real-life business project.
5. Class Activities; students will practice those concepts, tools and techniques in class activates.
6. Guest Speakers; instructor will invite guest speakers for specific topics.
Readings

The readings will be blend of a textbooks, research papers, managerial publications, case studies, and news publications. The readings will be uploaded in advance and can be found in the weekly blackboard content folder. Following books will be the primary sources for class lectures and discussions.

Required:

**Systems Analysis and Design; in a Changing World (7e)**
John W. Satzinger
Robert B. Jackson
Stephen D. Burd
Course Technology (2015)
ISBN: 978-1305117204

Recommended:

**Business Analysis Techniques; 99 Essential Tools for Success**
James Cadle
Debra Paul
Paul Turner
BCS (2014)
ISBN: 978-1780172736

Additional materials including caste studies, research papers and other readings will be provided in advance by instructor and will be uploaded to class management system at blackboard.syr.edu.

The readings fall in 4 categories:

- **Read**: Important readings that you are expected to read before the class, understand and use in your class discussions and activities, project, assignments and final reflection.
- **Review**: Know what the article is about and able to easily navigate the article later and use in projects, final reflections as additional resources.
- **Watch / Listen**: Educational videos, talks, podcasts or interviews.
- **Optional**: Recommended by the instructor but not required for completing the course.

As well as textbooks and readings, students will use appropriate applications to use and deliver the assignments and tasks such as Microsoft Office and other applications that will be discussed and selected during course.
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<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Topic</th>
<th>Tool</th>
<th>Technique</th>
<th>Special Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Monday (5/16/2016)</td>
<td>Chapter (1) Introduction to System Analysis and Design</td>
<td>System Development Life Cycle (SDLC)</td>
<td>-</td>
<td>System Theory</td>
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<tr>
<td></td>
<td>Monday (5/16/2016)</td>
<td>Chapter (10) Approaches to System Development and Design</td>
<td>Agile SDLC</td>
<td>RUP</td>
<td>XP</td>
</tr>
<tr>
<td>2</td>
<td>Tuesday (5/16/2016)</td>
<td>Chapter (12) and (13) Object-Oriented Design</td>
<td>Rational Unified Process (RUP)</td>
<td>Class Modeling</td>
<td>-</td>
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<tr>
<td></td>
<td>Tuesday (5/16/2016)</td>
<td>Chapter (2) System Requirements I</td>
<td>Business Requirement Document (BRD)</td>
<td>Requirements Organization &amp; Management</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Wednesday (5/17/2016)</td>
<td>Chapter (2) System Requirements II</td>
<td>Task Analysis</td>
<td>Swim Lane Diagram</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Wednesday (5/17/2016)</td>
<td>Chapter (3) and (13) Use Case Stories &amp; Use Case</td>
<td>Business Case</td>
<td>SWOT</td>
<td>Use-Case Diagram</td>
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<tr>
<td></td>
<td>Thursday (5/18/2016)</td>
<td>Chapter (5) Use Case Modeling</td>
<td>Use-Case Table &amp; Narrative Activity Diagram</td>
<td>Sequence Diagram</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Monday (5/19/2016)</td>
<td>Chapter (6) System Design</td>
<td>Feasibility Analysis</td>
<td>Cost-Benefit Analysis</td>
<td>Candidate Matrix</td>
</tr>
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<td></td>
<td>Monday (5/19/2016)</td>
<td>Chapter (7) System Architecture</td>
<td>Information Technology</td>
<td>Infrastructure Library (ITIL)</td>
<td>System Architecture Diagram</td>
</tr>
<tr>
<td></td>
<td>Monday (5/19/2016)</td>
<td>Chapter (8) User-Interface Design</td>
<td>Wireframes</td>
<td>Prototyping</td>
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* The schedule of class will be updated based on projects and guest speakers’ availability.
Requirements and Evaluation

Required Assignments:

Attendance, Professional Behavior and Class Activities and Participation (30 Points):
This is an experiential and collaborative course. Students are expected to attend each session and interact with instructors and with their classmates as needed in class discussion, activities, class online forum, and group projects. Active and productive participation in class discussion as well as online conversation on class forum on blackboard are highly valued. There will be many class activities that students will participate in without a specific grade, but not actively participating in those activities will lower their class participation grade. Professional behavior in class is also very important and will be valued throughout the whole semester.

Group Project, Collaboration and Deliverables (40 Points):
Students will be participating in a group projects which will be semester long, and students will work together to apply class lessons in a real-life information systems. The details of the projects and group collaborations will be announced at the beginning of the semester.

Individual Final Reflection (15 Points)
In the last session of the class, students individually will be handed few questions on the lesson learned over the semester including all topics that been covered and reflect on their educational and project experience. The final reflection will be open-ended questions and students will submit their reflection before final day of semester.

Group Project Presentation (15 Points)
At the end of the semester, students will present their project deliverable to class (as a group presentation) and also will prepare a poster presentation of their work and will participate on iSchool poster session and to present their work with SU iSchool family.

Optional Assignments;

InfoSystem-Nuggets (2 Points)
Students could prepare a short 2-minute presentation related to that class week’s topic which could be a piece of news, an interesting website, a new technology, new regulation, case study, introducing a company or anything that could be related to the week theme or project which is called “InfoSystem-Nugget”. The presentation should be accompanied by 1 page memos and optionally a PowerPoint slide or other illustration or visualization. For each Nugget, we expect 1 takeaway for the class. The goal of global nuggets is to keep class, students up to date with latest developments on the area of information system design and development. Each student can present 1 InfoSystem-Nuggets during semester.
Class Social Media Initiative: #IST654 (3 Points)

Students could initiate and engage in a social media campaign (Facebook, Twitter and LinkedIn) about the class, projects, their experiences, lesson learned, challenges and ideas using #IST654. The goal of this assignment is to raise awareness about the class, projects, promote the class and students activities, projects in classrooms and find similar classes that might initiate future collaborations.

Progress Points (5 Points)

Students can earn up to 5 points for their progress in class with assignments and class related activities. These 5 points are not guaranteed and it is based-on instructor’ evaluation of each student’ progress during the course of the semester, class' forum discussion participation and sharing, commenting on class weekly topics.

Summary of required and optional assignments:

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance, Professional Behavior, Class Activities and Participation</td>
<td>30</td>
<td>30%</td>
</tr>
<tr>
<td>Group Project; Collaboration and Deliverables</td>
<td>40</td>
<td>40%</td>
</tr>
<tr>
<td>Group Project Presentation</td>
<td>15</td>
<td>15%</td>
</tr>
<tr>
<td>Individual Final Reflection</td>
<td>15</td>
<td>15%</td>
</tr>
<tr>
<td>InfoSystem-Nuggets</td>
<td>+2</td>
<td>+2%</td>
</tr>
<tr>
<td>Social Media Initiative (#IST654)</td>
<td>+3</td>
<td>+3%</td>
</tr>
<tr>
<td>Progress Points</td>
<td>+5</td>
<td>+5%</td>
</tr>
</tbody>
</table>

Finally, there will be a short (7 questions) “Survey” that students required to answer and reflect on the class and all its components such as projects, topics and readings, class activities and the structure of the class in general. The results of this survey will be used for future development of the course and teaching methods in coming semesters. Students will also fill a “Self and Peer Evaluation” form for their group project.

Grading

Students will be graded as follows:

<table>
<thead>
<tr>
<th>From (%)</th>
<th>To (%)</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>95</td>
<td>100</td>
<td>A</td>
</tr>
<tr>
<td>90</td>
<td>94</td>
<td>A-</td>
</tr>
<tr>
<td>85</td>
<td>90</td>
<td>B+</td>
</tr>
<tr>
<td>83</td>
<td>85</td>
<td>B</td>
</tr>
<tr>
<td>80</td>
<td>83</td>
<td>B-</td>
</tr>
<tr>
<td>76</td>
<td>80</td>
<td>C+</td>
</tr>
<tr>
<td>73</td>
<td>76</td>
<td>C</td>
</tr>
<tr>
<td>70</td>
<td>73</td>
<td>C-</td>
</tr>
</tbody>
</table>

The numerical average of your grades will determine your final course grade.
Course Policies

- **Attendance Sheet & Name Tents:** Attendance sheet will be taken through the course at the beginning of each session and students are expected not to be late to class sessions. Also students required to bring their name tents every session and place them in front of them during the class.

- **Notice for Absence:** Students are expected to notice the instructor (1 day in advance) if they are going to miss a class for any reasons. Students are expected not to miss more than 2 of class sessions. Valid reason for absence should be mentioned in advance with instructor.

- **Cell Phone and Social Media Use:** the cell phones and social media are not permitted during the class session. There will be 15 minutes break every session and students could use that time for making phone calls and checking social media sites. The reason for this policy is that the course is based on the face-to-face and class collaboration, using cell phone and social media will distract other students, it will be hard for instructor to lead the class and of course it will affects students’ concentration. Please keep your phone silent during class session!

- **Professional Conduct:** Students are expected to have respectful, professional, open and collaborative approach with the instructor and their class mates. Students are expected to turn in the assignment on time. Late submission will affect students’ grade.

- **Team-work and Flexibility:** Students are expected to work with other students in their group and be flexible with each other schedule and have open approach working between different culture. The course aims to strength students’ team work and communications’ skill, therefore being proactive to work with colleagues are expected and valued. Students are expected to plan ahead and be on time for their group work as well as individual assignments. In case of students need more help with the assignments and project work, they should meet with instructor and seek instruction to solve the issue.

Course Webpage - Learning Management System (LMS)

The University’s learning management system Blackboard will serve as the communication and sharing center. The readings, handouts, this syllabus, and all other electronic information about the course (including your grades) will appear on Blackboard. The iSchool is in the process of moving from in own iLMS to Blackboard. The direct URL to Blackboard: [http://blackboard.syr.edu/](http://blackboard.syr.edu/) Questions regarding Blackboard should be directed to ilms@syr.edu or Peggy Brown at 315-443-9370.

Communication

All email communications with students for this course will be sent to their University-assigned email account @syr.edu as per University computing and electronic communication policy. I will not provide assignment, exam or final grades using any other email accounts in accordance with university policy.
Academic Integrity

Syracuse University’s academic integrity policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The university policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same written work in more than one class without receiving written authorization in advance from both instructors. The presumptive penalty for a first instance of academic dishonesty by an undergraduate student is course failure, accompanied by a transcript notation indicating that the failure resulted from a violation of academic integrity policy. The presumptive penalty for a first instance of academic dishonesty by a graduate student is suspension or expulsion. SU students are required to read an online summary of the university’s academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice. For more information and the complete policy, see: http://academicintegrity.syr.edu/

A note on Academic Integrity: Students are expected to take academic integrity very seriously. SU deals with academic integrity very seriously and students are expected to submit their own work. Student who use other people works will be penalized when graded, and may also be reported as in violation of the University’s academic integrity policy, if repeated.

Disability-Related Accommodations

If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), http://disabilityservices.syr.edu located in Room 309 of 804 University Avenue, or call (315) 443-4498, TDD: (315) 443-1371 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

Diversity and Inclusion Statement

Syracuse University values diversity and inclusion; we are committed to a climate of mutual respect and full participation. My goal is to create learning environments that are useable, equitable, inclusive and welcoming. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or accurate assessment or achievement, I invite any student to meet with me to discuss additional strategies beyond accommodations that may be helpful to your success.
Student Academy Work Policy

SU policy on student academic work may be found at:
http://coursecatalog.syr.edu/content.php?catoid=3&navoid=270#Student_Academic_Work

Student work prepared for University courses in any media may be used for educational purposes, if the course syllabus makes clear that such use may occur. You grant permission to have your work used in this manner by registering for, and by continuing to be enrolled in, courses where such use of student work is announced in the course syllabus.

Educational use of student work: I intend to use academic work that you complete this semester in subsequent semesters for educational purposes. Before using your work for that purpose, I will either get your written permission or render the work anonymous by removing all your personal identification.

Religious Observance

Syracuse University (SU) religious observances policy, found at:
http://supolicies.syr.edu/emp_ben/religious_observance.htm, recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice/Student Services/Enrollment/My Religious Observances from the first day of class until the end of the second week of class.

Latest Update: v12
18 April 2016 – 9 p.m.
Ehsan Sabaghian
iSchool at Syracuse University