Information Systems Analysis (IST654)

Class Information

Class Title: Information Systems Analysis  
Class Code and Semester: IST654 - Spring 2016  
Instructor: Ehsan Sabaghian, PhD Student at iSchool at Syracuse University  
Class Meeting Day and Time: Mondays, 12:45 p.m. - 3:30 p.m.  
Class Meeting Place: Hinds Hall, 018  
Learning Management System (LMS): http://blackboard.syr.edu  
Required Application: Microsoft Visio  
Office Hours: 45 minutes after class meetings and by appointments  
e-Mail: esabagh@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 goals, and improve work processes. New ICT technologies (in many forms and with different features) 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. Organizations required experts who have the knowledge and skill to link business side and IT side of the information systems analysis, design and development. IST654 offers those knowledge and skills.
Goals

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 4 major components:

1. **Class Lectures**; which covers the concepts aspects of information system analysis and design.
2. **Tools | Techniques**; 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 topic in information systems design and development.
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**; and students will practice those concepts, tools and techniques in class activates.
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.
## Class Schedule and Topics

<table>
<thead>
<tr>
<th>Week</th>
<th>Day (Date)</th>
<th>Topic</th>
<th>Tool</th>
<th>Technique</th>
<th>Special Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Monday (1/25/2016)</td>
<td>Greetings and Welcome IST654, Syllabus Review</td>
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<tr>
<td>2</td>
<td>Monday (2/1/2016)</td>
<td>Chapter 1; Introduction to System Analysis and Design</td>
<td></td>
<td>System Development Life Cycle (SDLC)</td>
<td>System Theory</td>
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<tr>
<td>4</td>
<td>Monday (2/15/2016)</td>
<td>Chapter 12 and 13; Object-Oriented Design</td>
<td></td>
<td>Rational Unified Process (RUP)</td>
<td>Network Theory</td>
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<tr>
<td>5</td>
<td>Monday (2/22/2016)</td>
<td>Chapter 2; System Requirements I</td>
<td></td>
<td>Business Requirement Document (BRD)</td>
<td>Social Network Analysis (SNA)</td>
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<tr>
<td>6</td>
<td>Monday (3/29/2016)</td>
<td>Chapter 2; System Requirements II</td>
<td></td>
<td>Swim Lane Diagram</td>
<td>Information Systems Theories</td>
</tr>
<tr>
<td>7</td>
<td>Monday (3/7/2016)</td>
<td>Chapter 3; Use Case Stories and Use Case</td>
<td></td>
<td>Use-Case Diagram</td>
<td>Soft System Methodology (SSM)</td>
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<td>8</td>
<td>Monday (3/14/2016)</td>
<td></td>
<td></td>
<td></td>
<td>Spring Break</td>
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<tr>
<td>9</td>
<td>Monday (3/21/2016)</td>
<td>Chapter 4; Domain Modeling</td>
<td></td>
<td>Entity Relation Diagram (ERD)</td>
<td>Socio-Technical Systems and Theories</td>
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<tr>
<td>11</td>
<td>Monday (4/4/2016)</td>
<td>Chapter 6; System Design</td>
<td></td>
<td>Use-Case Table</td>
<td>Information System Security</td>
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<tr>
<td>12</td>
<td>Monday (4/11/2016)</td>
<td>Chapter 7; System Architecture</td>
<td></td>
<td>Use-Case Narrative</td>
<td></td>
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<td>13</td>
<td>Monday (4/18/2016)</td>
<td>Chapter 8; User-Interface Design</td>
<td></td>
<td>Information Technology</td>
<td>Infrastructure Studies</td>
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<tr>
<td>14</td>
<td>Monday (4/25/2016)</td>
<td>Chapter 11: IS Project Management</td>
<td></td>
<td>Infrastructure Library (ITIL)</td>
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<tr>
<td>15</td>
<td>Friday (4/29/2016)</td>
<td>Projects Presentation and iSchool Poster Session</td>
<td></td>
<td>Prototyping</td>
<td>Strategic Information System Planning (SISP)</td>
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</table>

* The schedule of class will be updated based on projects and guest speakers' availability.
Assignments and Evaluation

Required Assignments:

Attendance, Professional Behavior and Class Activities and Participation (30%):
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 and the projects. Active and productive participation in class discussion and class activities 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 (40%):
Students will be participating in a group project that; project will be semester long, and students will work together to apply class lessons in a real-life project. The details of the projects will be announced at the beginning of the semester.

Individual Final Reflection (15%)
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 and Poster Session (15%)
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 (5%)
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.
Class Social Media Initiative (5%)

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 and find similar classes that might initiate future collaborations.

Summary of required and optional assignments:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Attendance, Professional Behavior and Class Activities and Participation</td>
<td>30%</td>
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<tr>
<td>Group Project</td>
<td>40%</td>
</tr>
<tr>
<td>Group Project Presentation and Poster Session</td>
<td>15%</td>
</tr>
<tr>
<td>Individual Final Reflection</td>
<td>15%</td>
</tr>
<tr>
<td>InfoSystem-Nuggets</td>
<td>+5%</td>
</tr>
<tr>
<td>Social Media Initiative (#IST654)</td>
<td>+5%</td>
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</tbody>
</table>

*** Finally, there will be short (5 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 years.

Grading

Students will be graded as follows:

<table>
<thead>
<tr>
<th>From (%)</th>
<th>To (%)</th>
<th>Grade</th>
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<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>
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<td>73</td>
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<td>C</td>
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<tr>
<td>70</td>
<td>73</td>
<td>C-</td>
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</tbody>
</table>
Important Notes

- **Attendance Sheet**: Attendance sheet will be taken through the course at the beginning of each session and students are expected not be late to class sessions.

- **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 4 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 professional, open and collaborative approach with the instructor and 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 their 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

The academic community of Syracuse University and of the School of Information Studies requires the highest standards of professional ethics and personal integrity from all members of the community. Violations of these standards are violations of a mutual obligation characterized by trust, honesty, and personal honor. As a community, we commit ourselves to standards of academic conduct, impose sanctions against those who violate these standards, and keep appropriate records of violations. The academic integrity statement can be found at: [http://supolicies.syr.edu/ethics/acad_integrity.htm](http://supolicies.syr.edu/ethics/acad_integrity.htm).

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.

Students with Disabilities

If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), [http://disabilityservices.syr.edu](http://disabilityservices.syr.edu), located in Room 309 of 804 University Avenue, or call (315) 443-4498 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.

Ownership of Student Work

This course may use course participation and documents created by students for educational purposes. In compliance with the Federal Family Educational Rights and Privacy Act, works in all media produced by students as part of their course participation at Syracuse University may be used for educational purposes, provided that the course syllabus makes clear that such use may occur. It is understood that registration for and continued enrollment in a course where such use of student works is announced constitutes permission by the student. After such a course has been completed, any further use of student works will meet one of the following conditions: (1) the work will be rendered anonymous through the removal of all personal identification of the work’s creator/originator(s); or (2) the creator/originator(s)’ written permission will be secured. As generally accepted practice, honors theses, graduate theses, graduate research projects, dissertations, or other exit projects submitted in partial fulfillment of degree requirements are placed in the library, University Archives, or academic departments for public reference.
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: v6
18 December 2015 - 11 a.m.
Ehsan Sabaghian
iSchool at Syracuse University