ISSCM 393 – Requirements Analysis and Communication
Writing Intensive and Experiential Learning
Fall 2017

Classroom: Corboy Law Center - 322
Instructor: Dr. Gezinus J. Hidding
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Office Phone: 312-915-7059
Office Hours: Wednesday and Friday 3:00-5:00PM, by email or by appointment

This is an Engaged Learning course, approved for the Fieldwork category, and thus satisfies the Loyola University Chicago Engaged Learning requirement. This is also a Writing Intensive Course.

Course Description:

This course focuses on Information Systems requirements and related communication skills. Students will learn how to gather requirements for Information Systems from an organization’s users and executives based on a general understanding of organizations and business goals. Students learn techniques of how to translate between organizational needs and requirements for systems and processes, and how to analyze, validate, and prioritize those requirements. A special focus of the course will be to improve business communication skills such as interviewing, listening, presenting and negotiating.

Prerequisites: Junior standing, C- or higher in INFS/ISSCM 247.

Course Overview:

Requirements Analysis plays a critical and fundamental role in developing software (or other “systems” such as business processes, training, etc.). In order to develop any (information) system for any organization, it is essential to establish the needs for that system. I.T. offers many potential system features (“smart” apps, YouTube videos, mobile, seamless processes, etc.), making it harder to choose which ones will be useful to the organization and which ones will not. If the purpose of a system is unknown, then it will be unclear what sort of a system should be developed, and it is impossible to determine whether the system, when developed will satisfy the needs of its users.

This course introduces requirements analysis and communication techniques and utilizes team-based learning as a means of obtaining practical experience that can be applied in real-world projects. Students (“you”) will complete an actual requirements project for a real organization and develop requirements
specifications utilizing the methodologies and templates taught in class. This is the basis for the Engaged Learning designation of this course.

The express goal of the course is to complete a project to develop the requirements for a real system for a real client (e.g., a department within Loyola or another organization/company). In fact, the course is the project and is designed around your doing the real requirements work and learning how to do that as they go along. The whole semester is focused on getting the project completed. The immediate goal of the course/project is to develop the requirements. The underlying goal is for you to learn how to elicit, gather, analyze and prioritize requirements, as practiced in the real world. You will be supervised and receive guidance from the instructor, from the client, and from professionals brought in from time to time to critique the work as it progresses. Towards the end of the semester, you present their complete requirements recommendations to the client(s), and the final exam is a reflection exercise on what you learned.

This course is a key course in our undergraduate specialization in Information Systems. Our specialization is designed to equip our graduates with key knowledge and skills for Business Analysis. The International Institute of Business Analysis (IIBA), a professional organization of Business Analysts (www.theiiba.org) defines Business Analysis as “the set of tasks, knowledge, and techniques required to identify business needs and determine solutions to business problems. Solutions often include a systems development component, but may also consist of process improvement or organizational change.” It goes on to say that “Business analysis is distinct from financial analysis, project management, quality assurance, organizational development, testing, training and documentation development. However, depending on an organization, an individual Business Analyst may perform some or all of these related functions.” A Business Analyst “understands business problems and opportunities in the context of the requirements and recommends solutions that enable the organization to achieve its goals” and “works as a liaison among stakeholders in order to elicit, analyze, communicate and validate requirements for changes to business processes, policies, and information systems.” Wikipedia (www.wikipedia.org) states that a Business Analyst “is responsible for analyzing the business needs of their clients and stakeholders to help identify business problems and propose solutions.” Susan Malisch, Loyola University Chicago’s Chief Information Officer (CIO) views Business Analysts as “analyzing business problems and translating business needs into requirements for information systems and business processes.”

The key aspects of a Business Analysts job that we will cover in this course are to analyze organizational needs, to translate between needs of the organization requirements for systems (incl. processes), to validate the requirements, and to communicate the requirements.

**Course Objectives and Learning Outcomes**

By the end of this course, you will be able to:

1. Describe fundamental concepts of requirements analysis (e.g., functional requirements, non-functional requirements, business events, etc.),
2. Describe the process of gathering, analyzing, prioritizing, validating and documenting requirements,
3. Document interview questions and interview results,
4. Document use cases,
5. Document requirement specifications,
6. Interact knowledgeably with professional requirements analysts and project managers.
In terms of the IDEA course evaluation system that Loyola uses, the key objectives for this course are:

21. Gaining factual knowledge (terminology, classifications, methods, trends)
23. Learning to apply course materials (to improve thinking, problem solving and decisions)
24. Developing specific skills, competencies and points of view needed by professionals in the field most closely related to this course
25. Acquiring skills in working with others as a member of the team
28. Developing skills in expressing myself orally or in writing

This course is designed around a real requirements analysis project. (Details of the specific projects will be provided early in the course.) In the course of doing a real requirements analysis project, you will learn what you need to know to complete the project.

In this course, completing the project is central. You will work on the project in teams of four to five people. You will form teams subject to constraints designed to create, in each team, diversity of backgrounds in, e.g., relevant experience in requirements analysis and/or background knowledge in project management or data bases, gender, national culture, or the like.

The course will be like a workshop/studio project. As a result, your learning in the course will be to an important extent self-directed.

Required Materials


They are/should be available at the University bookstore (WTC) and online. Keep in mind that they are also sold as a “trade book” (as opposed to a “text book”) at reasonable prices.

Additional course materials (e.g., PowerPoint, handouts, and the like) may be posted on Sakai.

Suggested Supplementary Resources

Other materials (e.g., PowerPoints) may be posted on Sakai during the course.

Course Requirements and Grading Criteria

There will be one test, the midterm. It can only be taken on the date and during the time indicated on the Schedule. Similarly, the Schedule shows the due date for various assignments and deliverables.

Dates/ times for quizzes or tests and due dates/ times for assignments and deliverables cannot be rescheduled on an individual basis, except in the event of an “excused absence” (defined below under Attendance). If you do not hand in the test or other assignments or deliverables or you hand them in late, in either case not because of an “excused absence”, it may receive zero points.
A portion of your total score in the course is for the work of your team (details below). Violations of academic integrity by one or more of your team member(s) may affect your total score in this course.

There will be one midterm test. It will be closed book, closed notes, closed everything. The questions will be designed to test your memorization of key concepts covered in the course up until the test, and also to have you compare and contrast various key concepts covered in the course. As the exam will be limited in time, it will cover only a subset of the key concepts covered in the course.

**General end-of-course engaged-learning reflection**

Loyola University Chicago's mission statement is “We are Chicago's Jesuit Catholic university- a diverse community seeking God in all things and working to expand knowledge in the service of humanity through learning, justice, and faith.”

The final exam will consist of a take-home reflection (open book/ notes/ everything) that is specific to this course (to be submitted to your instructor) and a reflection that is a general reflection required in Loyola University's Engaged Learning courses that connects your in-class and out-of-class experience.

**Grading scale**

During the course you can earn 100 points and 5 points of extra credit. They are divided as follows:

<table>
<thead>
<tr>
<th><strong>Midterm exam (individual score)</strong></th>
<th>20</th>
</tr>
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<tbody>
<tr>
<td><strong>Project Work (team score)</strong></td>
<td>40</td>
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<tr>
<td>- Final written requirements document</td>
<td>15</td>
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<td>(detailed standards will be discussed during the course, e.g., as dependent on standards imposed by our clients)</td>
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<tr>
<td>- Final presentation to your client</td>
<td>10</td>
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<tr>
<td>- Documents (team score, e.g., List of Business Events, etc.)</td>
<td>10</td>
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<tr>
<td>- Weekly Progress reports</td>
<td>5</td>
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<tr>
<td><strong>Effort (individual score)</strong></td>
<td>15</td>
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<tr>
<td>- Class attendance</td>
<td>8</td>
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<tr>
<td>- Project team participation (based on a peer evaluation)</td>
<td>7</td>
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<tr>
<td><strong>Project Work (individual score)</strong></td>
<td>25</td>
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<td>- Individual deliverable (e.g., use cases)</td>
<td>5</td>
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<td>- Presentation skills of dry-run of final presentations</td>
<td>5</td>
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<tr>
<td>- Final (Reflection assignment)</td>
<td>15</td>
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<tr>
<td><strong>Extra credit (individual score):</strong></td>
<td>5</td>
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<tr>
<td>- Extra effort during the semester</td>
<td>5</td>
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**Course Grading Scale**

A       90 points or up
A-      88 points or up
B+      85 points or up
Attendance

Class attendance and participation are fundamental components of learning, so punctual attendance at all classes, for the full class meeting period, is expected of Quinlan students.

While most of the work for the course will be done outside of class, class time will often be for team meetings to coordinate and organize the work that needs to be done to complete the project. Therefore, class attendance is crucial. Coming to class late, leaving early, or coming/going during class, is disrespectful of your teammates, of your classmates, and of your instructor and will be considered unprofessional. Most of the subjects in a course are sequential. Therefore, it is important to understand the material covered in any missed class before the next class.

While class attendance is not mandatory in this course section, there may be points deducted for each absence that is not an excused absence. An “excused absence” is an absence for which:
- you notified the instructor, beforehand if possible, of a significant event that is not under your control (e.g., a medical emergency), and
- the instructor received sufficient evidence in the form of appropriate documentation (e.g., doctor’s note, police report, etc.), and
- you submitted make-up work that the instructor deems satisfactory. It is your responsibility to request, and submit, any make-up work.

Make-Up Examinations/Assignments

Loyola University academic policy provides that tests or examinations may be given during the semester or summer sessions as often as deemed advisable by the instructor. Because Quinlan faculty believe examinations represent a critical component of student learning, required examinations should be taken during the regularly scheduled class period. Make-up examinations are discouraged. Exceptions may be granted only by the faculty member or department chair, and only for unavoidable circumstances. A make-up final examination may be scheduled only with the permission of the appropriate Quinlan Assistant or Associate Dean.

If a make-up examination must be given, it is the responsibility of the faculty member to prepare, schedule, and proctor the exam. For a student with a documented special testing need, please consult University policy concerning use of the testing center in Sullivan Center at Lake Shore Campus.

Academic Integrity

All members of the Quinlan School shall refrain from academic dishonesty and misconduct in all forms, including plagiarism, cheating, misrepresentation, fabrication, and falsehood...Plagiarism or cheating by
any student, or, in case of a group assignment or exam, by any team member(s) may result in the instructor assigning the student(s) involved the grade of “F” for the assignment or examination. In addition, all instances of academic dishonesty must be reported to the chairperson of the department involved.

For further information about expectations for academic integrity and sanctions for violations, consult the complete Quinlan School of Business Honor Code and Statement of Academic Integrity on the Quinlan website: http://www.luc.edu/media/lucedu/quinlanschoolofbusiness/pdfs/Honor-Code-Quinlan-July2012.pdf

Instructor Discretion

This course may occasionally deviate from the course outline above. The instructor reserves the right to make changes, at this sole discretion, to the course syllabus. Any substantial changes to the syllabus and/or the schedule will be announced in class and/or on sakai.

Any issue that is not described in this syllabus may be resolved at the sole discretion of the instructor.

Schedule: Class by Class or Week by Week Course Outline

A detailed schedule for this course (“Schedule”) is described in a separate spreadsheet that will be posted on Sakai along with this syllabus. The schedule shows, by day, topics, activities, deliverables, etc. That schedule is tentative, i.e., subject to change, dependent on how things go during the semester. Any significant changes will be announced on Sakai and/or in class.

Final Exam: See Schedule
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic(s)</th>
<th>Read</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>28-Aug</td>
<td>Intro - Instructor, course</td>
<td>RR: 1, 2</td>
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<tr>
<td></td>
<td>30-Aug</td>
<td>Intro of client project (Snap-on Credit)</td>
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<td></td>
<td>1-Sep</td>
<td>Intro of client project (Dr. Fortunato)</td>
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<td>2</td>
<td>4-Sep</td>
<td>NO CLASS: Labor Day</td>
<td>MJ: 1, 2</td>
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<td></td>
<td>6-Sep</td>
<td>Form teams: Teams coordinate work (in-class)</td>
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<td></td>
<td>8-Sep</td>
<td>Lecture: Business problem and users</td>
<td>RR 3, 5</td>
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<td>3</td>
<td>11-Sep</td>
<td>Teams coordinate work (in-class)</td>
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<td></td>
<td>13-Sep</td>
<td>Team norms/guidelines signed by all team members (team)</td>
<td>MJ 4, 5</td>
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<td></td>
<td>15-Sep</td>
<td>Team charter/ Team meetings; Scrum task board</td>
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<td><strong>Due at the end of this class session:</strong></td>
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<td>Interview questions (team)</td>
<td>Due at 11:59PM: Progress report 1 (team)</td>
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<td>4</td>
<td>18-Sep</td>
<td>Teams coordinate work (in-class)</td>
<td>RR 10, 11</td>
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<tr>
<td></td>
<td>20-Sep</td>
<td>Requirements</td>
<td></td>
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<td></td>
<td>22-Sep</td>
<td>Teams coordinate work (in-class)</td>
<td></td>
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<td>5</td>
<td>25-Sep</td>
<td>Lecture: Communicating Requirements</td>
<td>RR 16</td>
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<td></td>
<td>27-Sep</td>
<td>Teams coordinate work (in-class)</td>
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<td></td>
<td>29-Sep</td>
<td>Present to outside experts: Project Objectives/ Scope</td>
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<td><strong>Due at 11:59PM:</strong></td>
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<tr>
<td>6</td>
<td>2-Oct</td>
<td>Teams coordinate work (in-class)</td>
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<td></td>
<td>4-Oct</td>
<td>Teams coordinate work (in-class)</td>
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<td><strong>Due at the end of this class session:</strong></td>
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<td></td>
<td>Client Report Outline (formatted in Word) filled out with Objectives/Scope (team)</td>
<td>Due at 11:59PM: Progress report 3 (team)</td>
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<td>7</td>
<td>9-Oct</td>
<td>NO CLASS: Fall break</td>
<td>RR: 7, 8</td>
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<td></td>
<td>11-Oct</td>
<td>Lecture: As-Is, Solution Scope and Adjacent Systems</td>
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Deliverables due by class session's start, unless noted otherwise
8 16-Oct 16-Oct Team planning and coordination (incl. in-class reflection)
18-Oct Teams coordinate work (in-class)
20-Oct Teams coordinate work (in-class)

Due at 11:59PM: Progress report 5 (team)

Due at the end of this class session:
Revised team norms/guidelines signed by all team members (team);
Client Report Outline filled out with:
As-Is Process diagram(s) (team);

Due at 11:59PM: Progress report 6 (team)

9 23-Oct 23-Oct Lecture: Use Cases Scope, Scenarios
25-Oct Teams coordinate work (in-class)
27-Oct Teams coordinate work (in-class)

Due at the end of this class session:
Client Report Outline filled out with:
Might-Be Process diagram(s) (team);
List of use case triggers and names (team);

Due at 11:59PM: Progress report 7 (team)

10 30-Oct 30-Oct Teams coordinate work (in-class)
1-Nov Lecture: CRUD, Prioritizing Requirements

3-Nov Present to outside experts:
As-Is, Might-Be/Use Cases

Due at the end of this class session:
Client Report Outline filled out with:
Two (or more) product use cases per team member (individual)

Due at 11:59PM: Progress report 8 (team);

11 6-Nov 6-Nov Lecture: Fit Criteria, Quality Gateway
8-Nov Teams coordinate work (in-class)
10-Nov Teams coordinate work (in-class)

Due at the end of this class session:
Client Report outline filled out with:
Selected requirements (individual);

Due at 11:59PM: Progress report 9 (team);

12 13-Nov 13-Nov Lecture: BA Strategies
15-Nov Teams coordinate work (in-class)
17-Nov Teams coordinate work (in-class)

Due at 11:59PM: Progress report 10 (team);

13 20-Nov 20-Nov Teams coordinate work (in-class)
22-Nov NO CLASS: Thanksgiving break
24-Nov NO CLASS: Thanksgiving break

27-Nov
Teams coordinate work (in-class)
1-Dec Present to Outside Experts:
Dry-run of Client Presentation

14

27-Nov
Teams coordinate work (in-class)

29-Nov Teams coordinate work (in-class)

1-Dec Due at 11:59PM: Progress report 11 (team)

14

4-Dec
In-class reflection
6-Dec Teams coordinate work (in-class)
8-Dec Final Client Presentations

15

Due at the beginning of this class session:
Client Presentation (team);
Complete Client Report (team);
Due at 11:59PM: Progress report 12 (team)

11-Dec NO CLASS: EXAM WEEK
15-Dec Due: Final Exam take home