INFO 355 – Systems Analysis II

Syllabus

Spring 2013 (T, Th 3:30-4:50; Room 009)

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Blackboard usage: We will use only the following three folders:
(1) Syllabus: This folder contains the syllabus.
(2) Module: Module is the same as Week 1. So, Week 1 materials are posted in Module 1, etc. All the materials discussed in that week are posted in the corresponding Module. These include Lecture Notes, Assignments, Project descriptions, PEF (Peer Evaluation Form), Rose, and Visio, etc.
(3) Captured Lecture: http://learn.dcollege.net
   a. Use Drexel ID and PW to log in
   b. If you miss the class, watch the recorded lecture first and then ask questions.

Other Recommended Reading:

Other good books:

• Many resources are available on the Web. See the end of this syllabus for recommended URLs

Additional Readings:
Additional assigned readings will be distributed from time to time in class. Students are expected to be prepared to discuss the text and other assigned readings in class.

**Course Description:**
This course is intended to give students a foundation in object-oriented (OO) analysis and design using UML, which is the standard notation in OO modeling. The OO approach has been widely recognized as the accepted paradigm of modern system analysis and design technologies. Students will learn techniques including requirements solicitation, systems specification, and systems design with a focus on object-oriented techniques using UML. Our major focus will be using the three most widely used UML models: the use case model, the class model, and the interaction model using the sequence diagram.

It is assumed that you are familiar with traditional information system analysis and design methods (e.g. Entity-Relationship Diagrams, Data Flow Diagrams, Database Normalization, etc.) from INFO 200 and 210.

**Course Requirements:**
There will be two exams, in-class exercises, four homework assignments, and a term project. The specific dates for the mid-term exam and assignment dates are shown in the syllabus.

All the original lecture notes of the textbook are available at [www.course.com/ooad](http://www.course.com/ooad). Use your web key provided in the book to log in the website. The website also has other resources such as samples tests. My lecture notes are enhanced versions of them provided by the authors and will be posted in the Course Material folder of Blackboard.

**Software Tools:**
This course will require that you generate diagrams using the UML notation for your assignments and term projects. The primary tool for doing so will be Microsoft Visio or IBM Rational Rose. It is also acceptable to use any tool such as OpenSelect or SA/Object Architect, but those tools will not be discussed during the course.

Notice that UML notation is currently on version 2.4.1, but we may show UML version 1 conventions as well, since not all tools and books support version 2.x.

- **IBM Rational Rose:** Let me know if you want to use IBM Rational Rose. I will hand out the instruction sheet for downloading IBM Rational Rose.

- **Visio:** You will use Visio to develop UML models. (If you already have a Visio, the old version is sufficient for this class purpose.) You must have received an email for “DreamSpark MSDNAA” accounts that allow you to download a recent version of Visio software. You may also download other MS software such as SQL Server. The “DreamSpark MSDNAA” accounts was created and distributed via email to the students on Friday (March 29, 2013).

The email will come from “Drexel University - The iSchool - DreamSpark Premium noreply@e-academy.com.” If this is your first time getting an account, the subject of the email will be “An Account has been created for you”. Alternately, if you already had an account, the subject will be “Your account has been reactivated”.

2
If you did not receive the DreamSpark / MSDNAA welcome email or cannot find the email, go to the following link (copy and paste the following link to URL) and reactivate your account:


In the website, use your “Drexel” email address in the short form (abc123@drexel.edu) as the “username”. If after submitting their email address, if you still have not received the welcome email, contact ihelp@drexel.edu for further assistance.

If you are using, try some open source tools such as:

http://www.osalt.com/visio
http://argouml.tigris.org/
http://www.visual-paradigm.com/download/vpuml.jsp
http://live.gnome.org/Dia

Assignments

There will be four homework assignments for your hands-on experience. All homework assignments are to be done individually. Assignment due dates are real. If you cannot submit in class on the due date, send to me by email. Even if you have not totally completed an assignment, turn in on time what you have completed for a partial credit. No late assignments will be accepted for grading once the assignment material is discussed in class.

Late assignments will be allowed on the condition that (1) it is pre-arranged before the due date and (2) there is an unavoidable reason such as business trip, important family matters, sickness, accidents, or other extreme circumstance. All late assignments, however, will receive 10% off regardless of the reasons for the lateness. No make-up assignments will be given.

Individual completion of assignments and tests is mandatory. Note that copying sentences directly from the textbook, lecture notes, or other’s work is plagiarism and will not be accepted. Write with your own words.

Regarding homework assignments, handwritten work will not be accepted. All texts and diagrams must be generated by a computer (Rational Rose or Visio is recommended). All text should be in MS Word. Your full name along with the course number and date needs to appear at the top of each page.

Exams:

There will be two exams in class on the dates given below. The exams will be closed book, and consist of T/F questions, short discussion, and simple problem-solving questions. Exam contents will be based primarily on the lecture notes, reading materials, and assignments. A study guide will be provided. There will be no makeup exams, so make sure to be present! The final exam is mostly focused on the topics covered after the first exam. The final exam date will be announced by the University.

Exams must be taken at the assigned times. If you do not take an exam on time and do not have an appropriate excuse, you will receive an F on the exam.

Attendance & Participation:
Students are expected to attend and participate in each class session. Students are responsible for all material and assignments covered in their absence. Absence does not release you from the work that is due. “I wasn’t here” or “I didn’t know” is never an appropriate excuse. You are responsible for the work that is due. Absence for medical reasons or equivalent verifiable emergency is the only exception that will be made. If you miss a class, get a copy of the class notes from me (or website) and watch captured video of lectures from Blackboard.

Attendance is accounted for by your signature on the sign-up sheet handed out at the beginning of the class. You would need to be in contact with one or two classmates so you can check on what assignments you missed in class.

1. If you arrive at class after it has begun, you need to realize that you may feel confused at times not knowing what handouts have been distributed and what the current discussion at hand is. You will need to acclimate yourself in a discreet manner so that you will eventually be able to join the class. Please make every effort not to interrupt your fellow students. Attendance will be checked in every class. The rules are:
   - IF you miss ONE class, no deduction
   - IF you miss TWO classes, -1
   - IF you miss THREE classes, -2
   - IF you miss FOUR classes, -3
   -----------
   - IF you miss SIX, you get grade F for the course, regardless of your other scores.

   *Each attendance is defined as at least half of a class session.*

2. Class participations and supports are noticed and reflected in the grade

   Behaviors affecting your Participation grade:
   - Talking with next students in the class for other topics not being in discussion or not during in-class exercises
   - Using notebooks/computers during lecture for email checking and web surfing
   - Playing with cell phone/iPOD/PDA/iPAD in the class for non-class topics being discussed
   - **Checking emails during the lecture**
   - Any other behavior that hurts class environments
   - For this, you will be excused only once; from the second notice, there will be -1 for each notice. There could be more than one notice in a single class session, if the behavior persists.
   - (Nodding is allowed, though)

**Term Project:**

The term project will be the highlight of the course. Pick up the topic that could help your career in the most useful way. Students can do a group project, in a group of 1-3, but no more than 3. The project types allowed are:

(a) **Analysis and design**: Analyze a problem and create a complete analysis and design specification as discussed in the class. No implementation is necessary (up to 3 students).

(b) **Life cycle projects**: Pick up a small-sized problem, then analyze, design, and implement part of the domain. The purpose is to learn from implementation and compare models before and after the implementation. (up to 3 students).
(c) Research/Survey: Pick up an important topic and write a paper/report that can be publishable in an IT magazine or other venue (1-2 students).

(d) Tool project: Develop a tool related to analysis and design. This topic can be done by any number of members up to 3.

I recommend you choose Type (a) or (b). More details on the project topics will be discussed in Week 2.

**Project Proposals are due by the Thursday of Week 3. Submission of the proposal on time will carry 2% of your grade.**

**Grading:**
- Exam 1: 20%
- Exam 2: 25%
- Homework: 20%
- Participation: 10%
- Term Project: 25% (Proposal: 2%)

**Letter Grade**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>A+</td>
<td>97-100</td>
<td>Walks on water. Professional level work of the highest caliber.</td>
</tr>
<tr>
<td>A</td>
<td>94-96</td>
<td>Outstanding achievement. Student performance demonstrates full command of the course materials and evinces a high level of originality and/or creativity that far surpasses project and course expectations.</td>
</tr>
<tr>
<td>A-</td>
<td>90-93</td>
<td>Excellent achievement. Student performance demonstrates thorough knowledge of the course materials and exceeds project and course expectations by completing all requirements in a superior manner.</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
<td>Very good work. Student performance demonstrates above-average comprehension of the course materials and exceeds project and course expectations on all tasks as defined in the course syllabus.</td>
</tr>
<tr>
<td>B</td>
<td>84-86</td>
<td>Student performance meets designated project and course expectations and demonstrates understanding of the course materials at an acceptable level.</td>
</tr>
<tr>
<td>B-</td>
<td>80-83</td>
<td>Marginal work. Student performance demonstrates incomplete understanding of course materials.</td>
</tr>
<tr>
<td>C+</td>
<td>77-79</td>
<td>Unsatisfactory work. Student performance demonstrates incomplete and inadequate understanding of course materials.</td>
</tr>
<tr>
<td>C</td>
<td>74-76</td>
<td>Unsatisfactory work. Student performance demonstrates incomplete and inadequate understanding of course materials.</td>
</tr>
<tr>
<td>C-</td>
<td>70-73</td>
<td>Unacceptable work at varying levels of unacceptability.</td>
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<tr>
<td>D+</td>
<td>68-69</td>
<td>Unacceptable work at varying levels of unacceptability.</td>
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<tr>
<td>D</td>
<td>64-67</td>
<td>Unacceptable work at varying levels of unacceptability.</td>
</tr>
<tr>
<td>D-</td>
<td>60-63</td>
<td>Unacceptable work at varying levels of unacceptability.</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
<td>Failing—or dropped the course and forgot to tell anyone</td>
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**Incomplete policy**

Incomplete grades are contingent upon instructor approval and will only be considered in extenuating circumstances beyond a student’s control. The instructor is under no obligation to offer an incomplete grade. At least 80% of the graded coursework must have already been completed in order for an incomplete grade to be considered (per the
recommendation of the Provost’s Office). An incomplete contract with due date for delivery of the completed work should be completed by the student and the instructor. It can be found here:
http://www.ischool.drexel.edu/content/documents/incompletegradecontract.pdf.

**Tentative Course Outline**

- This schedule may be modified based on circumstances and class interests.
- *All assignments are due within a week unless otherwise stated.*

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Satzinger Chapters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week1</td>
<td>Introduction, Development Process</td>
<td>1, 8</td>
</tr>
<tr>
<td>Week2</td>
<td>UML Overview, Requirements, Discussion of Project topics</td>
<td>2</td>
</tr>
<tr>
<td>Week3</td>
<td>Requirement exercise, Use Case Modeling</td>
<td>3</td>
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<tr>
<td></td>
<td>(HW1: Given on Tuesday)</td>
<td></td>
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<tr>
<td></td>
<td>(Project proposal due on Thursday this week)</td>
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<tr>
<td>Week4</td>
<td>Use case relationships and documentation</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Class Diagram</td>
<td></td>
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<tr>
<td></td>
<td>(HW 2 given on Tuesday)</td>
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<tr>
<td>Week5</td>
<td>(Exam 1 on Thursday, May 3)</td>
<td>5</td>
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<tr>
<td></td>
<td>(HW 3 given on Thursday)</td>
<td></td>
</tr>
<tr>
<td>Week6</td>
<td>Class models-I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Project use case diagram review</td>
<td></td>
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<tr>
<td></td>
<td>(HW 4, given on Thursday)</td>
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<tr>
<td>Week7</td>
<td>Class models II</td>
<td>4</td>
</tr>
<tr>
<td>Week8</td>
<td>System Sequence Diagrams (Ch 5), System Sequence Diagrams (11)</td>
<td>5, 11</td>
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<tr>
<td></td>
<td>(Project class diagram review week and mid-report due)</td>
<td></td>
</tr>
<tr>
<td>Week9</td>
<td>Design class diagrams, DB access layer, Project reviews</td>
<td>10</td>
</tr>
</tbody>
</table>
### Important Dates:

- **Project Proposal Due:** Week3 (Thursday, April 18)
- **Exam 1:** Thursday, May 2
- **Final Exam:** University-assigned date
- **Project and Peer Evaluation Form Due:** Thursday, June 13

### Peer Evaluation Form (PEF) for group Projects

For each group project, a confidential Peer Evaluation Form must be filled out and submitted when the final project report is submitted. Every team member evaluates himself/herself and each fellow team member for various aspects of the project. Peer evaluations could affect your and your teammate’s grade; thus, it is in your best interest to ensure that these evaluations are conducted fairly. If an individual has taken on extra responsibility, such as organizing the group, extra effort for a particular model development, editing submissions for consistency, or assembling the whole project components, these activities should be indicated by group members and extra credit will be assigned to that person. Other factors considered are group leadership or ability to plan project and help keep team on track, contribution of each member to the overall project, quality of contribution, development of proposal and problem statement, contribution to the models common to all the members such as use case diagram, class diagram, and other diagrams. Without this form, your project grade will be zero. This form is required **only for group project members.**

### Academic Honesty:

*Do not give a hard copy of assignment answers or send your assignment answer files to your classmates. Both parties will suffer for doing this.*

Plagiarism is the representation of another’s words, ideas or work as your own. The standards for academic honesty are described in Student Handbook and on Drexel website. All students are responsible for reading and understanding these rules. For this course, all assignments are individual efforts and only the project is a joint effort venture.

For this course, **students found guilty of plagiarism can expect one or more or all of** -

(a) Incident being reported to the University Judicial Office, where a permanent record is maintained, and
(b) Fail the course.

*For group project’s all the team members are equally responsible to observe this policy, failure to do will lead to the whole team receiving an ‘F’, if such an instance is detected or suspected.*

Projects must be delivered to the instructor on or before the due date.

### Disabilities

Students with disabilities requesting accommodations and services at Drexel University need to present a current accommodation verification letter (“AVL”) to faculty before accommodations can be made.
AVL’s are issued by the Office of Disability Services (“ODS”). For additional information, contact the ODS at www.drexel.edu/edt/disability, 3201 Arch St., Ste. 210, Philadelphia, PA 19104, Voice: 215.895.1401, or TTY 215.895.2299.
Withdrawal of the Course

For dropping or withdrawing from the course, please refer to the university policies at:

http://www.drexel.edu/provost/policies/course_drop.asp
http://www.drexel.edu/provost/policies/course_withdrawal_policy.asp

Class Civility:

Please observe proper classroom etiquette to demonstrate respect for your classmates and the class:

➢ Turn off cell phones or put them into vibration mode before class begins.
➢ No phone use permitted in class. If you need to answer, you may go out of the classroom, answer, and come back to class.
➢ No email checking or surfing internet
➢ Arrive on time. Repeated late arrivals pattern is noted and accounted for. Arrival on time is very important not to lose important discussions.
➢ Late Arrivals – Do not disturb the class.
➢ Sleepy? – Make faces and pull down ear balls; Stretch your legs; stretch your arms over your head, massage your back neck and head. Sit straight; do not lean back. If nothing works, take a nap for 1 minute and ask your neighbor to wake you up.

Making A+ in this class:

• Attend class regularly; do not miss the class. Catch up the materials if you miss any lecture
• Use a 3-ring binder for flexible addition of notes and other materials
• Listen attentively and take good notes in class. Practice taking notes while listening to lectures and discussion; it improves learning. In addition, there will be material presented in class that is not covered in the text. Hence, your note-taking is very important not to miss important topics or examples.
• Make a list of questions and bring them to my office to ask them.
• Do the assignments by yourself and develop all the diagrams in a drawing tool or a CASE tool.
• Submit the assignments on time.
• Complete the assigned reading for each week before the class of that week.
• Review and answer the questions at the end of each assigned chapter on a weekly basis. This will help you prepare for exams.
• Submit your project models for a review on time.
• Do ask questions in classes, after the classes, via emails, or at my office.
• Visit my office with the question note