

# Designing and Developing an Information System - I450/I451 Fall 2003 Course Syllabus

**Course Description:** System design and development present both technical and managerial problems with which students will be familiar from their undergraduate course work. This course puts these lessons into practice, as students work in teams to develop an information system. Examples of course projects include design and development of a database for a business or academic application, preparation and presentation of an interactive media performance or exhibit, or design and implementation of a simulated environment (virtual reality).

**Instructor:** Dennis Groth      Email: [dgroth@indiana.edu](mailto:dgroth@indiana.edu)  
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Office Hours:      Monday, Wednesday 10-11  
and by appointment.

**Lecturer:** Matt Hottell      Email: [mhottell@indiana.edu](mailto:mhottell@indiana.edu)  
Informatics 302      Phone: 855-1096  
Office Hours:      Posted weekly, and by appointment.

**Associate Instructor:** Sean Ellis      Email: [seeellis@indiana.edu](mailto:seeellis@indiana.edu)  
Informatics 302      Phone: 855-1096  
Office Hours:      Wednesday 12-2  
and by appointment.

**Meeting Times:** TR 2:30 – 3:45 Woodburn Hall 101

**Technology Seminars:** Throughout the year we will be developing, and delivering topical seminars (outside of the regular scheduled lectures) on a variety of technologies/techniques. The need for these seminars has arisen from our past experience with the diverse range of skills and interests of students in the course. The emphasis of the seminars is on learning how to use a specific technology – ideally aimed at solving a problem related to your project. You are encouraged to suggest topics that you are interested in learning. You must attend and successfully complete at least 6 seminars (or equivalent) each semester to receive full credit for this portion of your course grade. Partial credit may be earned by attending at least 4 seminars. Extra credit may be earned by attending more than 6 seminars.

**Status Reporting:** You must submit a weekly written status report that identifies your activities relative to the course. You will be provided with a template, or software to facilitate the reporting. Like the technology seminars you must submit a report every week in order to receive full credit. Half credit can be earned by submitting at least  $\frac{3}{4}$  of the weekly reports. In the second semester the reports will be per project, with the expectation that you are communicating individual status within your team.

**Personal Objectives:** Part of becoming a professional involves the setting of personal goals and objectives. The instructors are committed to helping you be successful, but we want you to assume some responsibility in becoming self-directing. You will be asked to submit a written list of measurable objectives that you will work towards over the course of the year, report on your progress towards satisfying your objectives on your weekly status report, and a final report at the end of the year.

**Grading:** Half of your final grade is derived from your project, the bulk of which is completed in the second semester. The following table provides a breakdown of the relative value of each phase of the project, as well as the values for each individual assignment or exam.

Project	
Requirements	15%
Design	10%
Implementation	15%
Process	10%
Examinations (2)	20%
Technology Seminars	10%
Status Reports	10%
Personal Objectives	5%
Participation	5%

**Communications:** We will utilize OnCourse for all course communications.

**Home Page:** [www.informatics.indiana.edu/dgroth/courses/i450](http://www.informatics.indiana.edu/dgroth/courses/i450)

**Textbooks:**

- (1) *Software Requirements*, Karl E. Wieggers, Microsoft Press, 1999.  
(Required – but available online at Books 24x7 from the course homepage)
- (2) Other materials will be available on Books 24x7

## Lecture Topics

<b>Week</b>	<b>Date</b>	<b>Topic / Activity</b>
1	Sep 2, 4	Course Introduction, Information Systems Components Project Basics, Development Models
2	Sep 9, 11	Requirements Analysis Project Planning
3	Sep 16, 18	Functional Requirements Requirements Elicitation
4	Sep 23, 25	Data Requirements
5	Sep 30, Oct 2	Data Requirements
6	Oct 7, 9	Quality Requirements Project Management
7	Oct 14, 16	Midterm Exam – October 14 Functional Design
8	Oct 21, 23	Functional Design
9	Oct 28, 30	Data Design
10	Nov 4, 6	Data Design
11	Nov 11, 13	Database Programming, Scripting, Applications
12	Nov 18, 20	Database Programming, Scripting, Applications Project Estimation
13	Nov 25	Team organization
14	Dec 2, 4	User Interface Design, Tool Selection
15	Dec 9, 11	Project Presentations
16	Dec 18	Final Examination Period, 2:45 – 4:45

## **Policies**

### **Attendance.**

We expect that students will approach the course as they should a professional job - attend every class. Lecture outlines will be provided to assist you in following and organizing the course material, but are by design not a verbatim transcript of what is covered in the lectures. If you cannot attend class we would appreciate your notifying us that you will not be present - an email is sufficient.

### **Academic Integrity.**

As with other aspects of professionalism in this course, you are expected to abide by the proper standards of professional ethics and personal conduct. This includes the usual standards on acknowledgment of joint work and other aspects of the Indiana University Code of Student Rights, Responsibilities, and Conduct. Cases of academic dishonesty will be reported to the Office of Student Ethics, a branch of the Office of the Dean of Students.

### **Withdrawal.**

Wednesday, October 29, is the last day to drop a course or withdraw from all courses with an automatic 'W'. After that date, a student may withdraw only with the permission of his or her dean. This approval is normally only for urgent reasons related to extended illness or equivalent distress.

### **Incomplete Grade.**

An incomplete ('I') final grade will be given only by prior arrangement in exceptional circumstances conforming to university and departmental policy which requires, among other things, that the student must have completed the bulk of the work required for the course with a passing grade, and that the remaining work can be made up within 30 days after the end of the semester.

### **Group work.**

Because the capstone project is a group effort we expect that each member of a group will perform their activities to the best of their ability. Each team member must submit peer evaluation forms twice during the second semester. The forms will be due at the midpoint and the end of the semester. The information on the forms is used to apportion the project grade based on each team member's contribution. This means that grades among team members may vary.

### **Removal From Group.**

In extreme cases of non-performance on the group project a team member may be removed from the group. This will not occur without proceeding through a notification process and face to face meetings with the team, the affected team member and the instructors. This is not an open invitation to dis-invite someone from the team based on personality conflicts. If a student is removed from a project, an alternative project will be assigned.