

# Designing and Developing an Information System - I450/I451 Spring 2006 Course Syllabus

**Course Description:** Senior undergraduate students work on capstone projects in supervised teams. Teams select an appropriate project (preferably based on cognate specialty area), then learn to develop a plan that leads to success. Teamwork, communication, and organizational skills are emphasized in a real-world styled environment.

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**Meeting times:** Lab sections meet in Informatics 109

Monday, Wednesday	9:15-10:30	(17753)
Monday, Wednesday	10:30-11:45	(17754)
Tuesday, Thursday	2:30-3:45	(17755)
Tuesday, Thursday	4:00-5:15	(17756)

### **Weekly Status Meetings:**

At least one member of your project team must sign up for and attend a status meeting with one of the instructors each week. This duty must be rotated among the members of your team. The meetings will be scheduled in 15 minute increments from 8:30-11:45 on Wednesdays and 1:00-5:00 on Thursdays. Your team must deliver a status report prior to the scheduled meeting that details what activities are planned for the next week as well as what was accomplished in the previous week. More meeting times are available as necessary. For any unexcused meeting that is missed by the team your project grade will be reduced by 2 percentage points.

The lab is exclusively available for you to work on your projects during the scheduled meeting times. One of the instructors will always be present during the scheduled class times. We will continue the technology seminars during the labs. You are still responsible for attending and completing at least 14 technology seminars over the course of the full year.

In addition to the classroom, the 003 room in the basement is available with card access for working on your projects on a first-come, first-served basis. However, it is not fair to “move in” to the basement rooms. We will monitor the use of the rooms to see if additional rules for acceptable use are necessary.

One key success factor for your team will be to avoid “surprising” the instructors. This means that when a **serious** issue arises you report it in your weekly status meeting with one of the instructors. Do not hide problems you encounter! We are here to help, not just to evaluate.

### **Weekly Checkup Meetings:**

Every student must meet with one of the Associate Instructors each week during the semester. The purpose of the meeting is just to touch base and to allow students to get specific assistance or guidance from the Associate Instructors. Students should be prepared to show what they are working on for their project. Once a month you will be asked to complete a survey measuring use of collaborative tools.

#### **If your last name begins with**

A – F  
G – N  
N – Z

#### **Then you will meet with**

Sean Boyle  
Dave Kintgen  
Ryan Varick

Missing checkup meetings is cause for concern and will result in a process of escalated notices. The first missed meeting will result in an email message from the AI. For any other meeting that is missed your project grade will be reduced by 2 percentage points.

**Technology Seminars:** Throughout the year we will be developing, and delivering topical seminars (during the scheduled labs and other scheduled times) 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 14 seminars (or equivalent) during the year to receive full credit for this portion of your course grade. Due dates for technology seminar deliverables are one week after the seminar unless a written agreement from one of the course instructors is provided. Extra credit may be earned by attending more than 14 seminars. **You must hand in all of your seminar assignments by April 14 in order to receive credit.**

**Status Reporting:** You must submit a weekly written status report that identifies your activities relative to the course. The reports are per project team with detailed sections for each team member. 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. When your group is formed the reports will be per project, with the expectation that you are communicating individual status within your team. Create a resource folder in your Oncourse project site and deposit your status reports into it by Monday morning noon.

**Deliverables:** The single most important thing that students should focus on is meeting due dates for deliverables. We will provide guidelines for when the deadlines will occur. Your group will suggest the deadlines and we will review and approve them. Once a deadline is set you may only change a deadline if we approve the change. You will report your progress towards the deliverables on your master project plan. If you are at risk of missing a deadline you must explicitly report this in your status reports, along with an explanation of why the situation has occurred and what you are doing to remedy the problem.

**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)

**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	20%
Personal Objectives	5%
Participation	5%

You should note that “what” you deliver at the end of the year is less valuable than “how” you work towards delivery. You must provide evidence of sustained effort on your project.

**Deliverables:**

The final deliverable is a document that describes your project experience. The paper should describe the objectives of the project; how you organized your team to work on the project; details of the system/project; what you learned; and, what you would have done differently. Like the project, the final paper is a group effort. You should strive for a consistent writing style throughout the document, which means that you cannot do it at the last minute. You must turn in two different versions of your paper: a two page abstract; and, a long version with much more detail. You should write the paper with the knowledge that we will be constructing a booklet with the abstracts and a CD of the full papers.

Independent of the group deliverables, each student must complete an evaluation of their contribution to the team effort, relative to the other team members. This evaluation will not be shared by the instructors with any other student in the class and will be used for grading purposes.

Your team is responsible for establishing the schedule. However, a good rule of thumb to consider for your schedule is to target the end of January for the requirements and design to be completed, the middle of April for completing the work associated with the project, and the end of the semester for the final paper. If you get finished early, you can either enhance your project, or spend the time writing a really nice final paper.

Your team will present their project to the course in a closed session during the morning lab sections on **Wednesday, February 22**. This will provide you with peer feedback with respect to how your project is doing. Your team will present the final project at the Capstone Fair on April 28, from 3:00PM-6:00PM. You must design a presentation quality poster mounted on a foam core board. During the fair we will provide easels and you will discuss and demonstrate your project with interested individuals, including your classmates, Informatics students, faculty, parents, and other guests. We will keep your poster for future displays, including the graduation dinner. Check the FAQ on specifications for the poster.

**Non-performance:** In extreme circumstances a team member may be removed from a team due to non-performance. In such cases, the student will be provided an individual assignment, with the same set of deliverables as a team project. The team in such a circumstance will need to re-evaluate their schedule and communicate any change in scope based on the loss of resource.

**Peer Evaluation:** Each student will complete a peer evaluation form that assesses their team members' performance, as well as their own. There will be both a midterm and final evaluation. The specific results will not be shared by other members of the team. The information collected on the evaluations will be used to adjust final project grades.

## **Policies**

**Attendance:** We expect that students will approach the course as they should a professional job - attend every lab section possible. Make your efforts visible.

**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, March 8, 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.

## I450/I451 Project Completion Procedure 2005/2006

This document describes the set of artifacts that each project team should deliver in order to satisfactorily complete the semester:

- 1) A brief project abstract (not more than two pages) that provides a high-level description of your project that is understandable by a non-expert reader. The abstract will ultimately be posted on the capstone website for future teams, customers, employers, etc. **Submit this in electronic and paper form.**
- 2) A color poster that will be displayed at the capstone fair and in the building, on a rotating basis to serve as an even quicker overview of your project. You can use PowerPoint to create the poster by setting page size to the appropriate settings. The library has a plotter that can print large format paper for a small fee. Before you print a large format poster, however, make a draft and show it to the instructors for some quick feedback. **Submit this in electronic and paper form.**
- 3) If you have a functioning system, create a short 1-2 minute video of the system's user interface in AVI format. We have installed a nice full motion video capture suite of tools in the 003 lab called Camtasia that will record everything that happens on the screen. You can even add annotations and voiceovers if you want **Submit this in electronic form.**
- 4) A longer project report that describes more low-level details of the project. This may include the documents (requirements, designs, etc.) that you have generated over the course of the semester. Use this document to provide a sense that there was an overall plan behind what you accomplished. Discuss what you did not accomplish that you wanted to, as well as reasons why you think the project may have experienced problems and what you would do differently in retrospect. **Submit this in electronic and paper form.**
- 5) Attendance by team at capstone fair 3:00PM-6:00PM on Friday, April 28.
- 6) All access cards that were checked out during the year.
- 7) A completed team evaluation form handed in to one of the instructors.

Please submit all electronic materials on a labeled CD. You should make one for yourself as well, because we cannot guarantee that systems will stay in place and accessible in the future. Place the CD along with all paper deliverables and all access cards for your team in a labeled manila envelope.

While some items are due by the capstone fair, the remainder of the items must be turned in by 5:00PM Monday, May 1 for consideration. Items turned in after this time without previous consent may not be considered while calculating final grades.