Designing and Developing an Information System - I494/I495
Fall 2008 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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Office Hours: Mon 3:00-4:00 and by appointment.

Lecturer: Matt Hottell — Email: mhottell@indiana.edu
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Associate Instructors:
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The associate instructors will be located in Informatics 003.

Meeting Times:

MW 1:25 – 2:15	Ballantine Hall 109	(Lecture)
T 11:15 – 12:15	Informatics Building 109	(Lab)
W 11:15 – 12:15	Informatics Building 109	(Lab)
W 4:00 – 5:15	Informatics Building 109	(Lab)

Lab Sections: The labs are used for a variety of activities, including technology seminars and training, employer events, career planning and resume preparation, and as a time and a place to work. We keep track of your attendance at the labs so that you get credit for being there, which is one form of participation. Attend any, all, or as many as you can

Technology Training: Throughout the year we will be developing, and delivering topical seminars via podcasts (some may be physically presented in lab 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 develop a training plan, select, and successfully complete at least 14 seminars (or equivalent approved outside training opportunities) during the year to receive full credit for this portion of your course grade. Due dates for technology seminar deliverables are one week after you start a seminar unless a written agreement from one of the course instructors is provided. Extra credit may be earned by attending more than 14 seminars.

Our use of podcasts is new this year, and is designed to provide the maximum amount of flexibility for students in learning new techniques. It will also provide the ability for us to develop a substantial library of topics, which will serve as a resource for future classes, as well as students across campus. Each student is responsible for proposing, developing and delivering a podcast.

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. Your grade for each status report will be one of: exceeds expectations, acceptable, or not satisfactory. In all cases (even exceeding expectations) you can expect specific suggestions on how to improve your status reporting.

Team Formation: Each year we want to get the projects started earlier than the previous year. This year is no exception. We blend project selection and team formation. Some teams start by selecting a project or type of project, other teams form first and then search for the appropriate problem to solve. We like the students to participate in this process (if they want) by working with us on forming teams. If you have an idea for a project or a team talk to us right away.

Deliverables: The single most important thing that students should focus on is meeting due dates for deliverables – **according to a predefined plan**. 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 should not change a deadline without talking to us. 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.

Access Cards: You will be provided an electronic access card for the Informatics building. The card will give you 24-hour access to the building and the capstone lab (Room 003) in the basement. Other rooms may also be used, based on specific group needs. When you get your card (unless you do not want one) you will be subject to the following expectations:

1) You will use the facilities for appropriate, course related activities
2) You will leave the facility as you found it
3) You will notify the facility manager and the instructors if a problem occurs
4) You will not allow an unauthorized individual use your card
5) You will return the card at the end of the course
6) Your use of the card is electronically monitored
7) You will notify us immediately if you lose your card
8) Lost and un-returned cards will result in a $25 fee to your bursar account

The AIs will either be in this room or near it for office hours. The room may be used for overflow scheduling of interviews.

Presentations: There will be at least 1 (and hopefully more) electronic poster presentations during the year to allow everyone within the class to gauge their progress relative to the other teams. The final poster presentation is at the capstone fair on May 1st from 3:00PM-6:00PM.

Grading: Most 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	15%
Implementation	15%
Process/reporting	15%
Exam	10%
Podcast	5%
Training Plan	5%
Technology Seminars	15%
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.

The grade for the first semester is automatically an "R", which means that you will receive one grade for the entire class at the end of the second semester. Except for rare cases, the first semester and second semester grade will be identical.

Your group will receive an unofficial/unreported grade estimate for the project at the end of the first semester. You should interpret the grade as a trajectory for the final project grade, and it implies that if your level of effort, and the results of the project stay consistent, you should expect to receive the interim grade as a final project grade. Note that a group project grade does not imply that all members on a group will receive that grade. In particular, low performing individuals should not be surprised to receive a grade much lower than the project grade.

Communications: We will utilize OnCourse for all course communications.
Home Page: www.informatics.indiana.edu/dgroth/courses/i450

Textbooks:

(1) Readings will be assigned from online sources, and may include Books 24x7, which is linked from the course page or the library web page)

Key Deliverables

Week	Expected Date	Deliverable
3	Sep 15	Project team identified
5	Sep 22	Project proposals
5	Oct 1	Training and education plan
6	Oct 8	Projects solidified
12	Nov 17	Requirements document, draft project plan
15	Dec 10	Electronic poster presentation for class members
18	Jan 19	Design document
19	Jan 26	Detailed project plan
23	Feb 24	Electronic poster presentation for class members
31	May 1	Capstone Fair – Friday, May 1, 3:00-6:00 PM
32	May 4	Last day to turn in reports, CD's, DVD's, documentation

Lecture Topics (subject to change – especially with guest speakers)

Week	Date	Topic / Activity
1	Sep 3	Course Introduction, Information Systems Components Project Basics, Development Models, Lifecycles
2	Sep 8, 10	Team Organization, Dynamics, Personnel Issues Project Proposals
3	Sep 15, 17	Project Planning IT Career Fair (September 16)
4	Sep 22, 24	Functional Requirements Qualitative Requirements
5	Sep 29, Oct 1	Requirements Elicitation Data Requirements
6	Oct 6, 8	Quality Requirements, Requirements Documentation Project Management
7	Oct 13, 15	Project Risks
8	Oct 20, 22	Functional Design
9	Oct 27, 29	Data Design
10	Nov 3, 5	**Exam – November 3** User Interface Design, Prototyping
11	Nov 10, 12	Process Analysis
12	Nov 17, 19	Project Estimation Project Planning
13	Nov 24	Validation Techniques
14	Dec 1, 2	Test Plans
15	Dec 8, 10	Detailed Specifications Managing Change

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.

Job Search.
Because most students will be searching for a job at some point during the year, we expect that students might miss class or lab due to interview schedules. We understand the importance of finding an excellent job, but hope you will not skip too many of your classes – not only this class.

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.