

# Designing and Developing an Information System - I450/I451 Fall 2001 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  
[dgroth@indiana.edu](mailto:dgroth@indiana.edu)  
Lab Phone: 855-4318 Home Phone: 331-2296  
Office Hours: Sycamore 036, MW 11:00 – 12:00,  
and by appointment.

**Meeting Times:** MW 1:00 – 2:15 Woodburn Hall 118.

**Grading:**

|                |     |
|----------------|-----|
| Project        |     |
| Requirements   | 15% |
| Design         | 15% |
| Implementation | 15% |
| Process        | 10% |
| Examinations   | 25% |
| Homework       | 15% |
| Participation  | 5%  |

**The grade for the first semester is (R), although you will know (approximately) where you stand.**

**Textbooks:**

- (1) *Principles of Database Systems with Internet and Java Applications*, Greg Riccardi. Addison Wesley, Boston, MA, 2001
- (2) We may have one other textbook on User Interface Design.

## Lecture Topics

| Week | Date       | Topic / Activity  |
|------|------------|---|
| 1    | Aug 27, 29 | Course Introduction, Information Systems Components, Project Basics |
| 2    | Sep 3, 5   | Database Systems, Data Models                                       |
| 3    | Sep 10, 12 | Data Models, Relational Design                                      |
| 4    | Sep 17, 19 | Relational Design, Normal Forms, Index Methods                      |
| 5    | Sep 24, 26 | Database Access Methods, Security and Users                         |
| 6    | Oct 1, 3   | Database Queries  |
| 7    | Oct 8, 10  | Database Queries, <b>Exam 1</b>                                     |
| 8    | Oct 15, 17 | Database Queries, Views, Procedures                                 |
| 9    | Oct 22, 24 | Database Programming, Scripting, Applications                       |
| 10   | Oct 29, 31 | Scary projects  |
| 11   | Nov 5, 7   | Development Models – Waterfall, Cyclical / Iterative                |
| 12   | Nov 12, 14 | Requirements Analysis and Specification                             |
| 13   | Nov 19     | Use Analysis, User Interface Design                                 |
| 14   | Nov 26, 28 | User Interface Design, Tool Selection, <b>Exam 2</b>                |
| 15   | Dec 3, 5   | Project Proposals – Student Presentations                           |
| 16   | Dec 12     | Final Examination Period, 2:45PM                                    |