

# Web-Enabled Decision Support Systems (WebDSS)

EIN 6905 (3752) – Spring 2011 – v1

## Time and Location:

TR 8-9 (3:00-4:55pm); Weil Hall 238

## Instructor:

Dr. Timothy Middelkoop

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Phone: +1 (352) 392-1464

Office Hours: Weil 379 Tuesday 2:00pm-2:45pm, otherwise by appointment. Students with appointments during office hours will be given precedence.



## Class Website:

Class material will be managed by E-Learning located at <http://lss.at.ufl.edu/> and supplemental information can be found at <http://webdss.ise.ufl.edu/uf/webdss/trac>.

## Teaching Assistant:

Joanna Sandford <[joannasandford@gmail.com](mailto:joannasandford@gmail.com)>

## Catalog Description:

The ability to extract data from databases and embed analytical decision models within larger systems are some of the most valuable skills required for students entering today's IT dominated workplace. This course will teach how to use IT tools to develop decision support systems arising in the practice of IE/OR/Management and to make them web-enabled. (4 credits).

## Prerequisites:

CGS 2425 or equivalent; Co-requisite ESI 4312 (Operations Research 1) or equivalent.

## Text:

“PHP and MySQL Web Development,” by Luke Welling and Laura Thomson, 4th Edition, Addison-Wesley Professional, 2008. ISBN-13: 978-0-672-32916-6

“Database Design with UML and SQL,” by Tom Jewett, 3<sup>rd</sup> Edition, 2006. <http://tomjewett.com/dbdesign/>

## Computer:

You are required to have a notebook computer with wireless Internet connectivity that can run the required class software to sign up for this course. The notebook computer is necessary for in-class exercises and exams. Notebooks must have at least 1GiB of ram and 1GiB of free disk space.

## Software:

Supplied software package for Windows XP/Vista/7 otherwise XAMPP 1.7.3 and Eclipse 3.6.1/PDT. Software to [read](#) and [produce](#) PDF is required.

**Course Objectives:**

The objectives of the course are (i) to demonstrate to students the usefulness of decision support systems arising in the practice of industrial and systems engineering; (ii) to illustrate to students the essential concepts in database design; (iii) to teach them popular database management systems; and (iv) to enable them to design, develop, and implement integrated decision support systems for industrial and systems engineering applications using latest available IT tools.

**Class Attendance:**

Attendance for all classes is essential for continuity and understanding of the materials. Excessive absences impacts your understanding of the material and significantly degrades the benefit of your participation for the rest of the class. If you have more than four (4) unexcused absences, the instructor reserves the right to reduce your final grade by one letter. If you have more than seven unexcused (7) absences, the instructor reserves the right to assign a failing grade for the course. Late arrival or early departure may be considered an absence depending on circumstance. Accommodation (excused absences) will only be made for documented official university business or documented extenuating circumstances. Use of cell phones in class is not permitted at any time without prior approval, on the second offense the student will be asked to leave the class and the student will be recorded as absent.

**UF Counseling Services:**

Resources are available on-campus for students having personal problems or lacking clear career and academic goals, which interfere with their academic performance. These resources include:

1. University Counseling Center, 301 Peabody Hall, 392-1575, personal and career counseling;
2. Student Mental Health, Student Health Care Center, 392-1171, personal counseling;
3. Sexual Assault Recovery Services (SARS), Student Health Care Center, 392-1161, sexual counseling;
4. Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

**Special Accommodations:**

Classroom accommodations are made for students with documented disabilities at the request of the student in accordance with official university policies. Students must register with and provide documentation to Disability Resources (392-1261), and bring a letter to the instructor from Disability Resources indicating that you need academic accommodations. Requests are to be made at least one week in advance of the accommodation to provide the instructor time to make the appropriate arrangements.

**Emergencies:**

Students with personal or family emergencies will be given accommodation only after adequate documentation has been received. Documentation and arrangements can be made after the fact.

**Examinations:**

All written exams are open text book (PDF versions acceptable) with a single sheet of black and white notes. One side of the notes may be typed with a font size no smaller than 10 point and highlighting is permitted. All programming exams will have strictly limited Internet access. Makeup exams are only provided for students with documented extenuating circumstances such as family crisis, illness, official university business, etc.

## Class Schedule and Topics:

Lecture		Notes	Topics	Reading
1	2011-01-04	H1	Introduction, Academic Honesty Policy, Overview, Software	Intro.
2, 3	2011-01-11	H2	Web Design, Source Control Management, Project Assignment	1, 3
4, 5	2011-01-18	H3, A1	Relational Data Modeling ( <a href="http://tomjewett.com/dbdesign/">http://tomjewett.com/dbdesign/</a> )	8
6, 7	2011-01-25	H4	Normalization, Relational Databases, MySQL, SQL	9, 10
8, 9	2011-02-01	H5	Advanced SQL Queries	13
10, 11	2011-02-08	A2	Web Programming (PHP), Form Validation	4, 5
12, 13	2011-02-15	P1	Object Oriented Design, Database Connectivity	6, 7, 11
14, 15	2011-02-22	<b>E1</b>	Exam 1, Web Based Applications	
16, 17	2011-03-01	H6, P2	Sessions, Authentication and Authorization	17, 23, 27
	2011-03-08	<b>Break</b>		14, 25
18, 19	2011-03-15	H7, A3	Optimization ( <a href="http://www.coin-or.org/OS">http://www.coin-or.org/OS</a> ), PHP and OSiL	33
20, 21	2011-03-22	A4	Security, AJAX/Web 2.0	15, 16, 34
22, 23	2011-03-29	<b>E2</b>	Exam 2, Project Work	
24, 25	2011-04-05	P3	Term Project Work and Progress Meetings	
26, 27	2011-04-12	P4	Term Project Work	
28	2011-04-19	P5	Project Report	
29	2011-04-26	P6, P7	Project Presentations (Final 28C), Project Submission	

\* This schedule is tentative and will be revised throughout the class. Assignments and Homeworks are assigned during the week shown and Projects Milestones are due the week shown.

## Final:

The scheduled final (28C) is Thursday April 28<sup>th</sup>, 2011 from 12:30 a.m. to 2:30 p.m.

## Grading:

Project	160
Assignments	60
Homework	40
Quizzes	12
Presentation	8
Exam 1	60
Exam 2	60
<b>Total:</b>	<b>400</b>

## Extra Credit:

There will be no individual extra credit given in this class. You are encouraged to seek help before an assignment is due if you are unsure of the quality of your work or the assignment expectations.

## Homework:

All homework during the semester is to be submitted one hour before the beginning of the class on the day that it is due. Homework will be graded Satisfactory/Unsatisfactory/Fail. **Late homework will receive a grade of F.** Any exceptions must be cleared with the instructor at least 48 hours in advance of the due date of the assignment. Homework is generally due one week after it is assigned. Electronic submissions must be made using the class website. **E-mail submissions will not be accepted.** Electronic submission with incorrect file formats will be penalized. Written submissions that are illegible will be penalized.

## Projects and Assignments:

All assignments must be electronically submitted no later than 1 hour prior to the start of class on the day that it is due to the class website unless otherwise directed. All written material is to be typeset and professionally formatted and attached as a single PDF. All programming material must be runnable and include all source code and attached as a single zip file. **Late submissions will be deducted a letter grade for each hour that it is late. Submission with incorrect file formats and programs that do not run will receive a grade of F.** Make allowance for the submission process. Any exceptions must be cleared with the instructor at least 72 hours in advance of the due date of the assignment. The clarity, structure, and professionalism demonstrated in the assignment will be a factor in the grade.

## Quizzes:

All quizzes are given in class and are unannounced and must be completed in the class they are assigned. Accommodation will only be made for documented official university business *prior* to quiz or documented extenuating circumstances.

## Group Work:

Group assessment will be based on the performance of the group as a whole and individual scores will average to the overall group score. Groups will be required to submit a *statement of participation* at the conclusion of the project. Individual grades may be adjusted based on individual performance and peer reviews.

## Resubmission:

The course management software allows for resubmission, only the last resubmission will be considered for grading. Resubmissions that are made after the deadline are also considered late.

## Regrades:

Regrades of material is obtained by submitting a written explanation via the instructors mailbox within 72 hours of when the work is returned in class or the grade is posted. Regrades will only be discussed after submitting the work in this manner. The instructor reserves the right to regrade the entire work.

## Letter Grading:

The following percentages, rounded down, are used for the assignment of the final letter grades: 100-92 A, 91-90 A-, 89-88 B+, 87-82 B, 81-80 B-, 79-70 C, 69-60 D and 59-0 F or a curved grade, whichever is higher. Letter grades are converted to numerical scores using the following twenty point scale: A+ 20, A 19, AB 18, B 17, BC 16, C 15, D 13, E 6, and F 0. Homework grades of Pass/Fail/Incomplete are assigned full, half and no points respectively.

## **Class policies:**

Students are expected to be prepared for class and to participate in class discussion. Working together: you are encouraged to discuss the problems in homework and assignments, but all writing, programming and analysis are to be done by yourself. A good rule of thumb is that you should never copy anything other than class notes from another student. *Proper citation is required.*

## **Honor Code and the Academic Honesty Policy:**

UF's Academic Honesty Policy is stated in rule [6C1-4.017](#). **It is the student's responsibility to know and understand the universities Honor Code and Academic Honesty Policy.**

**Preamble:** In adopting this Honor Code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the University community. Students who enroll at the University commit to holding themselves and their peers to the high standard of honor required by the Honor Code. Any individual who becomes aware of a violation of the Honor Code is bound by honor to take corrective action. Student and faculty support are crucial to the success of the Honor Code. The quality of a University of Florida education is dependent upon the community acceptance and enforcement of the Honor Code.

**The Honor Code:** *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."*

**Academic Honesty Policy:** An academic honesty offense is defined as the act of lying, cheating, or stealing academic information so that one gains academic advantage. As a University of Florida student, one is expected to neither commit nor assist another in committing an academic honesty violation. Additionally, it is the student's duty to report observed academic honesty violations. Violations of the Honor Code and academic dishonesty will not be tolerated. Specifically, instructors will rigorously pursue incidents of plagiarism of any type or incidents of referring to any *unauthorized* material for any class requirement.

**Class Policy:** All cases of academic dishonesty will be handled in accordance with university policies and regulations. The minimum penalty for a reported academic honesty violation in this class is a zero on the assignment and a letter grade reduction for the final grade. Additionally, the student will be required to successfully complete an ethics seminar determined by the instructor.

**Compliance:** Before submitting any work for this class, please read the policies about academic honesty. For more information contact the [Office for Student Judicial Affairs](#), P202 Peabody Hall, 392-1261, or the [Student Honor Court](#), 364 JWRU, 392-1631, ext. 364. **All students are required to indicate that they have read and understood the class syllabus before any material will be graded.**

## **Software Use:**

All faculty, staff and students of the University of Florida are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University of Florida policies and rules, disciplinary action will be taken as appropriate.

## **Disclaimer:**

The syllabus and course material is subject to change. All changes will be announced in class and posted on the class website. Students are responsible for all announced changes.