Syllabus: CISC474: Advanced Web Technologies

University of Delaware, Dept. of Computer and Information Sciences

Course	CISC474 (Advanced Web Technologies)
Prerequisites	CISC220 (Data Structures) CISC370 (Object Oriented Programming Using Java)
Co-requisite	CISC437 (Database Systems)
Time/Place	Tue/Thu 2pm-3:15pm, Purnell 238
Course Home Page	http://udel.edu/~pconrad/cisc474
WebCT direct link	click here

Course Staff

	Name	Email	Web Site	Office Hours*
Instructor	Phillip Conrad	pconrad@udel.edu	http://udel.edu/~pconrad	MWF 10:15-11:15 Thu 3:30-4:30
Teaching Assistant	Emily Gibson	gibson@cis.udel.edu	http://www.cis.udel.edu/~gibson	Mon 3-5PM

*Note: Both Instructor and TA are also available by appointment. The office hours listed are valid on days when Spring 2005 UD classes meet and on the first Reading Day (May 19th), unless otherwise announced.

Prof. Conrad and your TA Emily Gibson want you to know that we are very interested in your questions, your feedback about the course, and in helping you to be successful. ***So, click here for some helpful hints about contacting us:***

Textbook and Other Resources

We will be studying and using several very large software systems based on Java. We will not be able to cover in class all the things that you need to know about these systems so it is important that you have access to good references for them. You should have a good, basic reference for Java 2 Standard Edition (J2SE) such as your textbook from CISC 370. (You didn't sell it back did you?!)

In addition, we will use the following:

Primary Textbook	 **click book for info**	**Head First Servlets and JSP** Passing the Sun Certified Web Component Developer Exam By Bryan Basham, Kathy Sierra, Bert Bates 1st Edition August 2004 Series: Head First ISBN: 0-596-00540-7 886 pages, List Price: $44.95
	If you are wondering about availability at the bookstore, read this!	

Secondary Textbook **(available online)**	The J2EE™ 1.4 Tutorial By Eric Armstrong, Jennifer Ball, Stephanie Bodoff, Debbie Bode Carson, Ian Evans, Dale Green, Kim Haase, Eric Jendrock HTML version : http://java.sun.com/j2ee/1.4/docs/tutorial/doc/index.html PDF version: http://java.sun.com/j2ee/1.4/docs/tutorial/doc/J2EETutorial.pdf Download: http://java.sun.com/j2ee/1.4/download.html#tutorial (16.57MB zip file with both HTML and PDF, and source code examples)
Other Resources	**Knowledge Base** **Web Resources**

Course Description and Objectives

This course deals with how to make web sites that serve "dynamic content": content that is based on returning or updating results in a database. Example systems include travel reservations, online shopping, but are not limited to so-called "E-commerce". (Coming up with a list of other applications is left as an exercise to the student. No really, its going to be among your first assignments. When I sat down one to day to make a list of possible projects, I came up with dozens.)

By the end of this course, you should have demonstrated that you can:

- Work in a team to implement high-quality web sites that serve dynamic content from a database to meet some "customer need".
- Document and Maintain such sites and the software behind them as customer needs change
- Describe both the major technologies and design approach you used to implement your sites
    - Comparing and constrasting your approaches with other options (e.g. pros and cons of JSP vs. CGI)
    - Presenting your descriptions in both written form (as a web site or printed document) and oral form (a presentation with slides).
    - Customizing your description for different types of audiences, that is both technical (fellow programmers), and non-technical (managers, users, customers

There are a wide variety of technologies that we could use to achieve these objectives, including JSP, PHP, modPerl, ASP, Cold Fusion, and others.
However, we are going to focus on only one technology and try to understand that one in more depth, rather than surveying all the various options. In particular, we will focus on Java-based web technologies, including servlets and JSP.

Problem Based Learning

The course will be taught using a Problem Based Learning (PBL) format. Students in groups work through real-world problems with the goal of learning how to apply software development techniques, find and evaluate information about programming technologies, and communicate ideas and information about software development to others. Discussions led by the course instructor, plus supplementary lectures, help to put the problems in context of the course objectives. When given a problem, students may be asked to identify what knowledge or skills are needed to address the problem (i.e. learning issues). Students pursue those learning issues both inside and outside of class time.

In addition to the course goals mentioned above, the PBL approach suggests some additional course goals, listed here: http://udel.edu/~pconrad/cisc474/05S/info/behavioralGoals.html

The PBL technique was pioneered for training doctors in medical schools. The University of Delaware is an international leader in the application of this technique to undergraduate education, where it has been widely used. More information about how PBL will be used in this course can be found here: http://udel.edu/~pconrad/cisc474/05S/info/pbl.html

Grading

Final course grades will be determined as follows:

Midterm Exam	20%	in-class 3/24 (Thu before Spring Break)
Final Exam	20%	scheduled exam time during finals week
Group Work	20%	various projects throughout semester numbered **G01**, **G02**, etc.; components of grade weighted by point value
Individual Homework	30%	various projects and homework assignments throughout semester numbered **H01, H02**, components weighted by point value
Class Participation	10%	determined by class attendance and participation in in-class activities numbered **P01, P02**, etc.

In addition, the final course grade may be no more than 10 points (one letter grade) higher than the exam average.

Some activities in the G01, H01, P01 activities will be graded with point values (out of 20 points, 50 points, 100 points, etc.). Minimum guaranteed grades for such assignments and for exams will be determined by the following point scale:

A-	90≤ grade≤93	**A**	93≤ grade≤100		
B-	80≤ grade<83	**B**	83≤ grade<87	**B+**	87≤ grade<90
C-	70≤ grade<73	**C**	73≤ grade<77	**C+**	77≤ grade<80
D-	60≤ grade<63	**D**	63≤ grade<67	**D+**	67≤ grade<70
				F	grade<60

Other activies will be graded with check/check plus/check minus grading. The exact conversion formula from check/check plus/check minus grading to numeric scores will be determined by the instructor at the end of the semester, and will be consistent for the entire class. The following are minimum guarantees, and expected maximum values:

grade	symbol	criteria	minimum	maximum
check plus	√+	exceeds expecations	**90**	**100**
check	√	meets expectations	**80**	**90**
check minus	√-	acceptable but does not completely meet all expectations	**70**	**80**
zero	0		**0**	**0**

Finally, scores determined according to the criteria above are minimum guaranteed grades. The instructor reserves the right to relax these criteria (i.e. change them in the students' favor) on a class-wide basis if it is determined that the grades determined by these criteria do not reflect actual student acheivement.

Policies

The main course policies can be summarized as follows:

1. Show up and be on time (for class and group meetings)
2. Be honest (especially regarding academic honesty)
3. Respect people
4. Turn in work on time. If/when this fails, respect the late penalties.
5. Report grade disputes in a timely fashion.

A more detailed look at these and other course policies can be found here.

ADA Accomadations

If you have a disability that requires special accommodation, please contact me by email (pconrad@udel.edu) or in person during office hours within the first week of classes.

Disclaimer

Information in the syllabus is subject to change as the instructor sees fit, or as required by Departmental, College, or University policy, provided that reasonable notice is given to the class.

Acknowledgments

I am grateful to Bob Caviness, Paul Amer, Hal White, Terry Harvey, and others for giving me permission to adapt text from their syllabi for inclusion in this document.

Invitation

Please contact me by email, phone or during my office hours if you would like to discuss any aspect of the course; I welcome the opportunity to be of assistance.

Phillip T. Conrad, last updated 2/7/2005