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IS 450 - Web Programming I Winter 2004 Syllabus

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Credits: Three (Semester)

Course Description:

An introduction to the design and development of multi-tier web based applications. An overview of the architecture for multi-tier web applications is covered with an emphasis on the presentation and business layers. Applications consisting of JSP's, servlets, and java beans will be built to generate dynamic web p and deployed to a web application server. Students registering for this class must also register for the corresponding lab (IS 400L) that goes with this course.

Materials:

- Steelman, A and Murach, J. (2003). *Java Servlets and JSP*. Fresno, CA: Murach.
- Active BYU-Idaho student email account (check it daily!)

Objectives:

At the end of this course, students will:

- Install and configure a basic Tomcat server in a standalone environment.
- Demonstrate a basic understanding of the N-tiered application architecture.
- Develop a multi-tiered application using:
 - self-developed and distributed Java classes within the application.
 - Java Server Pages (JSP's) and xhtml pages as part of the application's Presentation layer.
 - Java library classes to connect and pass data to and from the data layer.
 - text, xml and databases for data storage

Core Requirements

- All web and jsp pages are well-formed xhtml 1.0 transitional files;
- All web applications are contained in a single project (root) folder, appropriately labeled (lastf450
- All web applications are accessible via an index.jsp page stored at the project root level;
- All web applications are organized into directories appropriately labeled;
- All web applications share a single WEB-INF folder;
- The project shares a single web.xml file in the WEB-INF folder.
- All chapter applications storing data in a txt file will use a unique file name for that chapter.

Lab Facilities

Smith 422 is [available for your use](#) to complete assignments. The lab is available most days but is closed on designated school holidays, Sundays and while classes are in session. **You should not enter the room while classes are in session!** The lab operating hours are posted outside the room. Please consult the operating card prior to entering the lab.

Tentative Schedule

All due dates below represent the "best case scenario." We may alter the schedule as needed.

Date	Topic	Assignment
1/5	Advising Day - No Class	
1/6	Course Introduction	N-tier Architecture
1/7	N-Tier Architecture	Read Ch 1
1/12	Web Application Structures	
1/13	Common Structures and Guidelines	
1/14	Common Structures and Guidelines	Read Ch 2
1/19	MLK Day - No Class	
1/20	Installing and configuring Tomcat	
1/21	Complete Tomcat install	Complete standalone install
1/26	XHTML Review	
1/27	XHTML Review	
1/28	index.jsp and war file creation	Submit a war file; Read Ch 4
2/2	Basic Java Server Pages	
2/3	Basic Java Server Pages	Read Ch 5; Exercise 4-2 due Saturday
2/4	Servlet Basics	
2/9	Servlet Basics (continued)	
2/10		
2/11		
2/16	President's Day - No Class	
2/17		Read Ch 6; Exercise 5-2 due Saturday
2/18	MVC Web Application Structure Reviewed	
2/23	Client Side Validation	
2/24	Server Side Validation in the Controller	
2/25	Error Correction and Process Completion	
3/1	Mapping using the web.xml file	Read ch. 7; Chapter examples and Exercise 6-1 due Saturday;
3/2	Sessions and Cookies	
3/3	Sessions and Cookies (continued)	
3/8	Sessions and Cookies (continued)	Read Ch. 8; Chapter Chapter 7 and Exercises 7-1 to 7-4 due Saturday
3/9	JavaBeans	
3/10	JavaBeans (continued)	
3/15	JavaBeans (continued)	Chapter 8 and Exercise 8-2 due Saturday
3/16	Database Install and operation	Read Ch. 10;
3/17	Review SQL using SQL Gateway Servlet	Read Ch 11;

3/22	Databases and Java	
3/23	JDBC and Connection Pooling	
3/23	MVC and databases	
3/29	MVC and databases	
3/30	Catch-up Day	Exercise 11-2 due Saturday;
3/31		
4/5		
4/6		
4/7		
4/12		
4/13		
4/14		
4/18		

* Late and Incorrectly Submitted Work

All work is due on the date specified, by Midnight. All late work is penalized 50%.

Submitting Work

Work will be deployed to the application server and graded via http link. All work must be posted to the by the due date.

Winter 2004 Business Presentations

Business Summit: The Business Summit will be presented on March 25th. This event will offer business professionals in a forum where student's can listen and ask questions to increase their professional know as well as attend seminars presented by the attending guests. Your attendance is encouraged. Speakers and locations will be announced when available.

Business Seminars: A Business Executive Seminar will be presented on January 22nd. This event will feature Mark Slack in a forum setting. Your attendance is encouraged. More information can be obtained from the Business Management Dept. [web site](#).

Extra Credit: Any student who attends one or more of the afore mentioned seminars or lectures can receive points extra credit per instance, up to a maximum of 20 points total. The student, to qualify, must complete a write up and submit it as if it were an assignment for the course using normal submittal channels. The write up must follow these guidelines:

1. Speaker Information
 - o Name:
 - o Title:
 - o Company:
 - o Title or Topic of Presentation:
 2. Summary of Presentation (2 to 3 paragraphs)
 3. Your impressions or conclusions regarding the presentation (1 paragraph)
- Be sure to include your name, class, section and date in the document header. All submittals must be word processed, single spaced and professional in appearance.

Letter Grades

- 1 - A WAR file is required. Without a [correct](#) war file being submitted you cannot pass the class.
- 2 - The grading scale is based on the total Assignment Count. An "A" is equal to the Assignment Count for each missing assignment, a grade scale drop occurs.
- 3 - Each assignment, not each chapter, counts as 1 assignment.
- 4 - Extra credit of 10 points is equal to 1 assignment, 20 points is equal to 2 assignments.

Class Policies

Attendance

Attendance is required. Materials, processes and techniques will be covered in class that may not be found in class resources. Therefore, it is to your benefit to attend consistently. Remember it is your responsibility to fulfill all assignments and other coursework, regardless of attendance, by the date time specified. If you will be missing class for any reason other than emergency sickness or school excused absence, work must be submitted in advance.

Children In Class

Children are not allowed to be present in BYU-Idaho classes due to space restrictions, fire code compliance, and the need to limit distractions. Students have the responsibility to arrange for child care away from classrooms and study areas so as to preserve and enhance learning opportunities for all students. In one-time emergency situations, the teacher of a class may allow a student to bring a child to class based on terms set by the teacher. Teachers are neither required nor encouraged to consent to a student's request to bring a child to class, but should use discretion based on the best interest of all students in the class.

Computer Ethics

The use of the school's network, systems and data impose responsibilities and obligations upon the students to use these computer components in an ethical manner and in accordance with the guide found in the Honor Code. Students are to access only data and files that are owned by them or the instructor who has given explicit authorization for them to be used. Copyrighted material must be used in accordance with copyright law and applicable license agreements followed. Attempting to circumvent or subvert system security measures or engaging in any activity that causes harm to systems or to information stored thereon, such as creating or propagating viruses, disrupting services, or damaging files are considered inappropriate use. Violators are subject to disciplinary actions as prescribed by school policy and may also be prosecuted under applicable local, state, or federal civil or criminal law.

Computer Use

During class presentations you are to use only those applications being studied as part of the specific curriculum. E-mail, Internet and Instant Messaging use are prohibited unless being used for class assignments. Violators of this policy will be asked to close the application or leave class. Please do not disrupt class by using these other applications during class time.

Content Disclaimer

This syllabus represents a proposed overview of the content, expectations and sequence of the course. Changes may occur during the course at the discretion of the teacher. Students will be informed when and if such changes occur.

Honor Code

All students are expected to abide by the Honor Code and Dress and Grooming Standards. These

standards apply to all classrooms and labs. If you are not sure of the standards or honor code, please review them here: [Dress and Grooming](#) and [Honor Code](#). Hats, caps and shorts are all popular attire but are not appropriate for classrooms and should not be worn in classrooms or labs by men or women.

Reasonable Accommodation for Students with Disabilities

In compliance with applicable disability law, qualified students with a disability may be entitled to 'reasonable accommodation.' It is the student's responsibility to disclose to appropriate personnel Services for Students with a Disability (SSD) Office any special need he/she may have and to provide the appropriate documentation of the disability. The SSD office is located inside the Learning Assistance Center, McKay Library 1st floor.

Last updated: February 23, 2004

[BPR](#)