

**MSI 602 - Advanced Concepts in Information Systems II
Enterprise Application Development
University at Albany, SUNY
Spring 2004**

Instructor Information

Name: Sanjay Goel / William Brigham
Email: goel@albany.edu / wbrigham@uamail.albany.edu
Phone: (518) 442 4925 / (518) 453-9567
Office Hours: (Goel) Mon: 12:30-2:00 or by appointments / (Brigham) By appointments
Office: (Goel) BA 310b / (Brigham) By email

Class Information

Time: T 9am - 12pm
Room: BA 233
Dates: January 27 - May 4 2004
Available Labs: MIS Lab, HRIS Lab

Course Overview

This course teaches students how to plan and implement an online business. The class is broken down into groups of about 4 students. The course begins with each group brain-storming to generate new ideas for an online business. Over the first four weeks students learn about financial analysis, marketing analysis, and risk analysis. Thereafter each group takes their ideas and evaluates them for feasibility and selects one idea for implementing a business. At the end of five weeks each group presents their business plan which is evaluated by a set of external reviewers.

The students spend the next six weeks understanding the architecture and technology (Java/J2EE) for developing multi-tier (client/server/data) systems. The students spend 1-2 two lectures studying the technology behind each of the tiers in their enterprise application. The database tier design requires the students design their databases and connect to them from Java code using JDBC. The server tier design involves use of servlets and JSPs to encapsulate the business logic in the application. The client tier involves the developing of web pages using html or some web development tool. The students complete the implementation of their system by the end of the 12th week and present their projects to the Chamber of Commerce (or other industry representatives) and give a demonstration of the projects.

In the last phase of the class the students learn about XML and Web Services and their role in enterprise application development. The course also covers security in the design of enterprise applications. Security curriculum involves role-based access control as well as authentication and authorization for mobile code based applications. The class will require some programming, thus knowledge of Java Programming will be very useful.

Books & Software

Text Book: Beginning J2EE 1.4: From Novice to Professional (Apress Beginner Series)
by James L. Weaver, Kevin Mukhar, James P. Crume (Available Feb 04)
Reference Book: The Complete Book of Business Plans by Covello and Hazelgren
Reference Book: Java by Dissection: The Essentials of Java Programming by Pohl & McDowell, McGraw Hill
Reference Book: Database Design, Application, Development, & Administration by Michael V. Mannino, McGraw Hill

Grading

Assignments: 20%
Project: 50% (10% business plan, 10% data-tier, 20% 3-tier architecture)
Final Exam: 30%

Course Schedule

Week	Date	Topics	Instructor	Readings
1	01/27	Introduction to the course, objectives, expectations, and deliverables Overview of Entrepreneurship Basic business models covering e-commerce, retail, service, and manufacturing What's hot and what's not Group assignment and discussion Class Assignment: Consensus on business concept	Brigham	Review of business Plan Class Notes/ Handouts
2	2/3	(Tentative 2,3, and 4 Speaker at start of class. Ex entrepreneur, economic dev, banker) Developing a business plan Components of a business plan Why a business plan? Group strategy for completion Class Assignment: Begin writing a business plan		Class Notes/ Handouts
3	2/10	Financial statements for business plans Bookkeeping Financial resources and program (traditional to venture) Business plan progress update Class Assignment: Develop financial statements Class Assignment: Continue to write the business plan		Class Notes/ Handouts
4	2/17	Holiday		
5	2/24	Market Research Sales and marketing strategies Legal structures and liability Business plan progress update Class Assignment: Complete business plans		Class Notes/ Handouts
6	3/2	Review and presentation prep. Each team presents their proposals to economic development and financing professionals. The proposals are critiqued and graded for their idea, content, thoroughness, and due-diligence. Students are expected to submit their final business plans at the end of the class.		Class Notes/ Handouts
7	3/9	Review of Databases and SQL Java Database Connectivity Class Assignment: Write Software to connect to a database and write simple SQL statements to get database.	Goel	
8	3/16	Multi-tier Architecture for enterprise systems Web Containers, Servlet Programming, web servers Class Assignment: Write servlets and execute them in the Tomcat environment		
9	3/23	Sessions, Context & Collaboration Class Assignment: Write application for session tracking using servlets		
10	3/30	Web deployment , authentication and packaging War files, mapping requests Class Assignment: Take two servlets, establish communication between them and deploy them on the server		
11	4/6	Holiday		
12	4/13	Java Server Pages		

		Class Assignment: Write a JSP code for a sample problem provided in class		
13	4/20	Extensible Markup Language (xml) XML APIs Web Services Introduction (SOAP, UDDI, WSDL) Class Assignment: Write an application to parse an XML document and extract information		Notes
14	4/27	Development and Deployment of Web Services Exam		
15	5/4	Present the final projects (Review Board)		