

**ITM 602: Enterprise-Wide Application Development  
University at Albany, State University of New York  
Spring 2005**

**Instructor Information**

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Office Hours: M 12:30pm - 2:00pm

**Class Information**

Time: Tuesday 9:05am - 12:10pm  
Location: BA 233  
Dates: January 25 - May 3  
Credit(s): 3  
Call #: 4320  
Available Lab(s): BA222

**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 require 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.

**Learning Objectives**

Students will learn:

1. How to integrate knowledge from different business functions to create a business plan
2. The process for developing large scale enterprise applications
3. How to develop multi-tier architecture
4. How to hone their critical thinking and presentation skills by developing the business plan and presenting their work to a professional audience

**Assignments**

Assignments given in any week are due at the beginning of the class on the same day in the following week. There will be a penalty for late assignments unless there is a very pressing reason for the delay. Please work individually on all assignments. Stop by my office (BA 310b) if

you have difficulty in understanding the assignment or the course material related to the assignment.

### Project

Students will need to form a group project team with 3 to 4 students per team. Each team will develop a three tier enterprise application which will involve development of web pages, servlets and connection to a database (Access or Oracle) using JDBC. One of the projects could be an online retail store which sells a variety of goods such as books, toys and CDs. The team project will include a final project report as well as a presentation in the last class. The students will be evaluated on the report, presentation and the quality of the software developed. A more detailed description of the project is provided in a separate project document.

### Text & Reference Books

Text: Beginning J2EE 1.4: From Novice to Professional (Apress Beginner Series)

Reference: Covello & Hazelgren, *The Complete Book of Business Plans*

Reference: Ira Pohl & Charlie McDowell, *Java by Dissection, The essentials of Java Programming*, Updated Edition.

Reference: Michael V. Mannino, *Database Design, Application, Development & Administration*, McGraw Hill

### Grading

Homework: 20%

Project: 50%

Exam: 30%

### Course Schedule

No.	Date	Topics	Readings	Instructor
1	1/25	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	Review of business Plan Class Notes/Handouts	Brigham
2	2/1	(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	2/8	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	2/15	Market Research Sales and marketing strategies Legal structures and liability Business plan progress update Class Assignment: Complete business plans	Class Notes / Handouts	

No.	Date	Topics	Readings	Instructor
5	3/1	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	
6	3/8	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
7	3/15	Multi-tier Architecture for enterprise systems Web Containers, Servlet Programming, web servers Class Assignment: Write servlets and execute them in the Tomcat environment		
8	3/29	Sessions, Context & Collaboration Class Assignment: Write application for session tracking using servlets		
9	4/5	Web deployment , authentication and packaging War files, mapping requests Class Assignment: Take two servlets, establish communication between them and deploy them on the server		
10	4/12	Java Server Pages Class Assignment: Write a JSP code for a sample problem provided in class		
11	4/19	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		
12	4/26	Development and Deployment of Web Services Exam		
13	5/3	Present the final projects (Review Board)		