



Enterprise Wide Information Systems

ITP 320x (2 Units)

Fall 2008

Description This course is designed to provide the student with a thorough understanding of both the role that Enterprise Resource Planning Systems (ERPs) play in an organization and the challenging task of managing the Information Systems (IS) function. During the semester, projects will be assigned that afford the student the opportunity to work through many real-life business situations using the SAP ECC system and explore the interaction among the different business processes. SAP is the world's leading provider of client/server software designed to integrate every aspect of a company's operation. The hands-on exercises, coupled with the in-class discussions of ERPs, will prepare the student with the knowledge sought by businesses looking to use technology to maintain their competitive edge in the market place.

- Objectives** At the completion of the course, students will be able to
- Describe the role of an ERP in carrying out business processes in a company
 - Explain how 'best business practices' are incorporated in an ERP
 - Execute an entire business process chain in the following areas
 - Customer Order Management
 - Procurement
 - Production
 - Accounting
 - Strategize pricing, production and sales in a competitive commodity market
 - Analyze sales data in an ERP to dynamically respond to changing market conditions to maximize profits
 - Expedite production planning and control using tools provided in an ERP (e.g. MRP)
 - Report on the reasons for the success (or failure) of their production and sales strategy

Instructor Nitin Kalé

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Office Hours 2 – 4 pm W, Th

Lab Assistants TBD

Lecture Thursday, 5 - 6:20, KAP 160

Lab (choose one) Thursday, 6:30-8, KAP 160
Thursday, 6:30-8, KAP 107

Open Lab Hours KAP 267
Monday, noon - 5 pm
Thursday, noon - 5 pm
Friday, 11 am - 4 pm

Availability of computers is on a first-come, first-served basis. Course lab assistant will not be present. Use these extra lab hours to work on your projects, however, it is hoped that you will be able to complete the projects during class time listed above.

Simulation Game An ERPSimulation Game will be played during lec/lab and/or possibly on a Friday. Participation in the game is mandatory for each team.

- Required Books**
- ITP 320 Course Reader: *Projects*, will be available at the USC Bookstore
 - ERP Simulation Game: *Participant's Manual* will be available at the USC Bookstore
 - Extensive lecture notes will be provided online

- Reference Books**
- A good reference (not required) book is: SAP R/3, Business Blueprint, 2nd Edition, by *Thomas A. Curran & Andrew Ladd*, Prentice Hall PTR, ©2000, ISBN: 0-13-085340-2

Software SAP is the leading vendor of Enterprise Resource Planning Systems in the world. ITP/USC has an Academic Alliance with SAP America for the past 10 years. Several ITP courses utilize the SAP system as a tool and platform for class projects and homework.

Students will receive software (SAP GUI) to connect to the SAP ECC 6.0 server so that they can work from their personal computers. ITP labs have the GUI pre-installed.

Website <https://blackboard.usc.edu>

Grading The final grade will be based upon the total percentage earned. The weight of graded material during the semester is listed below. **No extra credit assignments will be offered.**

Projects	25%
Midterm Exam	25%
ERPSim Game	25%
Final Exam	25%
Total	100%

Final letter grade is based strictly on total percentage earned. NO EXCEPTIONS!

Grading scale (percentage):

A	100-95
A-	94-91
B+	90-87
B	86-83
B-	82-79
C+	78-75

C	74-71
C-	70-67
D+	66-63
D	62-59
F	58 or below

- Policies**
- Projects turned in after the deadline will automatically have 5 points per day deducted.
 - No make-up exams (except for medical or family emergencies) will be offered nor will there be any changes made to the Final Exam schedule.
 - Before logging off a computer, students must ensure that they have emailed or saved projects created during the class or lab session. Any work saved to the computer will be erased after restarting the computer.
 - ITP is not responsible for any work lost.
 - ITP offers Open Lab use for all students enrolled in ITP classes. These open labs are held beginning the second week of classes through the last week of classes. Please contact your instructor for specific times and days for the current semester.

Academic Integrity

The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. It is often difficult to distinguish between a culpable act and inadvertent behavior resulting from the nervous tension accompanying examinations. When the professor determines that a violation has occurred, appropriate action, as determined by the instructor, will be taken.

Although working together is encouraged, all work claimed as yours must in fact be your own effort. Students who plagiarize the work of other students will receive zero points and possibly be referred to Student Judicial Affairs and Community Standards (SJACS).

The School of Engineering adheres to the University's policies and procedures governing academic integrity as described in SCampus. Students are expected to be aware of and to observe the academic integrity standards described in SCampus, and to expect those standards to be enforced in this course.

All students should read, understand, and abide by the University Student Conduct Code listed in SCampus, and available at:

<http://www.usc.edu/student-affairs/SJACS/nonacademicreview.html>

Students with Disabilities

Any Student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m. - 5:00 p.m., Monday through Friday. The phone number for DSP is (213)740-0776."

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Course Outline

Week 1 – Introduction

Week 2 – ERP Overview

- Course Overview
- Discussion of database applications
- Business function vs business process
- Introduction to enterprise software and enterprise resource planning (ERP)
- Examples of ERP – SAP
- Client/Server Technology, SAP BASIS
- Getting Started with SAP

Project 1: SAP Environment

Week 3 – ERP Functionality

- Business Reference Model
- Best business practices

Week 4 – Business processes - Customer Order Management Process

- Customer processing
- Sales activity
- Creating customer master data, material master data and pricing conditions

Project 2 – Customer Order Mgmt.

Week 5 – Procurement Process

- Raw Material procurement
- Creating vendors and pricing conditions
- Forecasting raw material requirements using sales information, production requirements, sales forecast

Project 3 – Purchasing Cycle

Week 6 – Production Process and control

- Creating a production plan (from forecasting etc.)
- MRP – Materials requirement planning
- Creating Production orders and scheduling
- Executing a Production process
- Inventory and Goods movement

Project 4 - MRP

Week 7 – Production contd.

- Executing a Production process
- Inventory and Goods movement

Project 5 - Production

Week 8 – Accounting

- Understanding Generally accepted accounting principles GAAP
- Posting financial transactions
- Controlling – Cost centers and cost elements

Project 6 - Accounting

Week 9 – Midterm Exam

Week 10 – ERP Simulation Game

- Goal of the ERP Simulation Game
- Game description
- How the market works, dynamic commodity demand and supply
- Master data configuration

Week 11 – ERPSim contd.

- Planning and forecasting for procurement and production
- Carrying out Production for Quarter 1

Week 12 – ERPSim – Quarter 1

- Trial game
- Strategy for Q2 – Pricing and marketing

Week 13 – ERPSim – Quarter 2

- ERPSim contest
- Playing the simulation game in real time as the market fluctuates

Week 14 – ERPSim – Quarters 3 & 4

- Analyzing data from the 3 quarters
- Producing Profit and Loss statements for the company

Week 15 – ERPSim – Student Presentations

- Final report and presentations
- Future SAP topics
 - ERP Security
 - ERP Programming
 - ERP Implementation
 - ERP Configuration
 - Supply chain management with SAP
 - Business Intelligence using data warehouses and data mining

Week 16 – Final Exam, Thursday Dec 11th 4:30-6:30 pm