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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 hand's-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 1 – 4 W

Lab Assistants Amanda Gowen, gowen@usc.edu
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Lecture 10:00 – 11:50 Tuesday | KAP 160

Lab	10:00 -11:50 Th | KAP 107
	12:00 -1:50 Th | KAP 107

Textbook

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

- ERP Simulation Game: A printed *Participant Manual* will be provided to each student (no electronic copy)

- Extensive lecture notes will be provided online

Software This course uses SAP ECC 6.0, an Enterprise Resource Planning software, extensively to explore how ERPs are essential to companies in today's world. Students will be provided with a free downloadable graphical user interface that they can use to access the SAP system at ITP.

Website *http://blackboard.usc.edu*

Grading The final grade will be based upon the total percentage earned. The weights of graded material during the semester are listed below:

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

Check blackboard.usc.edu for your grades. Contact grader to discuss score discrepancies. No complaints will be entertained at the end of the semester.

Policies
- Projects turned in after the deadline will automatically have 2 points per day deducted. No projects will be accepted after 1 week beyond the project's original due date.

- 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.

- "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."

- "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."

Enterprise Wide Information Systems
ITP 320x (2 Units)

Course Outline

Week 1 – Introduction
- Course Overview
- Discussion of database applications
- What are businesses processes?
- Business function vs business process
- Introduction to enterprise software and enterprise resource planning (ERP)

Week 2 – ERP Overview and BASIS Technology
- Major business processes
- Example of a manufacturing company – buy, make, sell and track
- Examples of ERP – SAP
- Description of SAP ECC Enterprise Central Component
- Client/Server Technology, SAP BASIS

Week 3 – ERP Functionality
- Business Reference Model
- Business Blueprint
- 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

Week 5 – Procurement Process
- Raw Material procurement
- Creating vendors and pricing conditions
- Forecasting raw material requirements using sales information, production requirements, sales forecast

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

Week 7 – Production contd.
- Executing a Production process
- Inventory and Goods movement

Week 8 – Accounting
- Understanding Generally accepted accounting principles GAAP
- Creating Balance sheets
- Reading and interpreting Profit and loss statements
- Creating General ledger accounts

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 – Quarter 3
- 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 Customization
  - Supply chain management with SAP
  - Business Intelligence using data warehouses and data mining

Week 16 – **Final Exam**