

Configuring Enterprise Resource Planning Systems

ITP 422 (3 Units)

Spring 2013

Description In-depth configuration experience and understanding of business process integration. Learn how to configure an ERP (Enterprise Resource Planning) system for a hypothetical company from the ground up. Design the organizational structure, master data, and rules to support the core business processes for the manufacturing, procurement, customer order management, and financial tracking functions of a business. Emphasis will be placed on the cross-functional business processes and critical integration points that are necessary for the success of a company. Transaction tests are employed to demonstrate the effectiveness and functionality of the environments created. In today's competitive marketplace it is essential to have a good understanding of the big picture of information systems.

- Objectives** After completing this course, students will be able to
- List the important and necessary decisions businesses need to make before configuring their information systems
 - Configure an Enterprise Resource Planning system for integrating business processes
 - Create a fully functioning information system with emphasis on -
 - Financial Accounting (FI)
 - Controlling (CO)
 - Sales and Distribution (SD)
 - Materials Management (MM)
 - Production Planning and Control (PP)
 - Warehouse Management (WM)
 - Reconfigure an ERP system as a company grows
 - Test, debug and document the configuration process for future changes
 - Describe the importance of organizational structure, master data and business rules in the configuration process

Students will be able to configure an ERP (SAP) for their company from the ground up.

Prerequisite ITP 320 or ISE 583

Instructor Nitin Kalé

Contact Info kale@usc.edu | OHE 412 | 213.740.7083

Office Hours 10:00 -12:00 M | 10:00-12:00 T | 2:30-4:30 W

Lecture/Lab 2 – 4:50 p.m. Monday, KAP 267

Grader and Lab Assistant Hitendra Mistry, hmistry@usc.edu

Course Website All course materials will be posted on blackboard.usc.edu. You are expected to check updates on Blackboard routinely. You may change Blackboard notification to suit your needs.

Textbook Integrated_Business Processes with ERP Systems, by *Simha R. Magal and Jeffrey Word*, ISBN: 978-0-470-47844-8, Wiley

Software This course uses **SAP ECC 6.0** system for all projects. The SAPGUI will be provided to all students which will help them work on the SAP server from any networked computer.
In addition, you will have access to a **Virtual lab** that you can access from your own computer. This remote server has all the required software for the course.

Grading The weight of graded material during the semester is listed below. ***No extra credit assignments will be offered.***

Homework	30%
Midterm Exam	25%
Final Project	15%
Final Exam	30%
Total	100%

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

Grading scale (percentage):

A	100-95
A-	95-92
B+	92-89
B	89-86
B-	86-83
C+	83-80
C	80-77
C-	77-74
D+	74-71
D	71-68
D-	68-65
F	65 or below

Policies

- Homework turned in after the deadline will automatically have 10 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 saved their work (on their personal email accounts or flash drives) created during class. 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.

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."

**Policy on
Religious
Holidays**

University policy grants students excused absences from class for observance of religious holy days. Students should contact instructor IN ADVANCE to request such an excused absence. The student will be given an opportunity to make up work missed because of religious observance.

Students are advised to scan their syllabi at the beginning of each course to detect potential conflicts with their religious observances. Please note that this applies only to the sort of holy day that necessitates absence from class and/or whose religious requirements clearly conflict with aspects of academic performance. Please refer to the Holy Days Calendar
<http://orl.usc.edu/religiouslife/holydays/>

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Course Outline

Week 1 – Jan 14th - Introduction

- Course Overview
- Review of Enterprise Resource Planning
- Importance of Business Processes
- Introduction to case company
- Establishing enterprise requirements
- Business Process Integration
 - Organizational structure
 - Organizational functions
 - Business rules

Homework – Analyze the structure of the case company. Execute cash-to-cash business process on a preconfigured company.

Week 2 – Jan 21st - Holiday

Week 3 – Jan 28th - Financial Accounting

- Role of Financial accounting in business processes
- Explain the role of General Ledgers
- Differentiate Accounts Receivable and accounts payable
- Chart of Accounts
- Balance sheets, Income statements
- Organizational Structure

Homework – Configure the financial accounting for case company. Create master data for various types of accounts

Week 4 – Feb 4th – Cost Accounting

- Managerial accounting
- Organizational structure for costing
- Cost centers
- Cost elements
- Assigning and distributing cost
- Product cost controlling
- Allocations and distributions

Homework – Configure the cost accounting for case company. Create master data for various types of cost centers and cost elements

Week 5 – Feb 11th – Materials Management

- Definition of material
- Creating Master data for materials
- Managing buying, selling and production of materials

- Purchasing and vendors
- Inventory management
- Purchase orders
- Payments and invoices

Homework – Identify and create the vendors, purchasing procedure, pricing. Configure the organizational structures essential for processing purchase orders and invoicing

Week 7 – Feb 18th - Holiday

Week 6 – Feb 25th – Materials Planning

- Planning strategies
- Forward and backward consumption
- MRP

Homework – Create material masters utilizing different planning strategies. Create plans for finished goods, raw materials etc.

Week 8 – Mar 4th - Sales and Distribution

- Organizational structure for S & D – Sales organization, distribution channel, division, sales area
- Configuring materials, vendors and customers
- Pricing
- Availability and delivery scheduling

Homework – Analyze the sales order process and configure customers as well as sales organization structures. Establish different types of pricing – customer or material specific

Week 9 – March 11th - Midterm Exam

Week 10 – March 25th - Sales and Distribution (contd)

- Different processing for different types of sales orders
- Goods return
- Goods movement

Homework – Configure the master data required for cost center accounting Decide how costs are allocated to various cost centers, then implement those allocations

Week 11 – April 1st - Production Planning

- Production Forecasting
- Sales and operations planning
- Demand Management

Homework – Elements of production planning. Configure demand management to automate planning

Week 12 – April 8th - Production Planning contd.

- Material requirements planning
- Production orders and process

- Bill of materials, work centers, routing
- Goods movement

Homework – Configure MRP controllers to automatically create purchase requisitions, purchase orders and planned production orders.

Week 13 – April 15th – Warehouse Management

- Warehouse structure
- Warehouse goods movement

Homework – Configure a warehouse for storage and goods distribution. Perform a stock transfer from a production plant to a warehouse

Week 14 – April 22nd – Expanding the case company

- Globalization
- Global sourcing

Final Project

Week 15 – April 29th – Expanding the case company (contd)

- Global sales
- Multi-currency

Week 16 – *Final Exam, Monday May 13th, 2-4 pm*