

# ISE 583: Enterprise Wide Information Systems

**Units: 3**

Summer 2016

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## **Time and Location**

2:30 – 5:50 pm, TTh

OHE 120 and online

Course website: [courses.uscden.net](http://courses.uscden.net)

## **Instructor**

Name: Nitin Kalé

Associate Professor of Engineering Practice, Information Technology Program and Epstein Department of Industrial and Systems Engineering, Viterbi School of Engineering

Office: OHE 412

Office Hours: 1:15 – 2:15 pm, TTh

Contact Info: [kale@usc.edu](mailto:kale@usc.edu), 213-740-7083

## **Teaching Assistant**

Name: TBD

Office Hours: TBD

Contact Info: TBD

## **IT Help**

*Please contact the Professor or the TA first for assignment related IT help.*

Additionally, IT help will be provided by Viterbi IT

Hours of Service: 8am – 5pm M-F

Contact Info: <http://viterbi.usc.edu/servicedesk>, 213-740-0517, [engrhel@usc.edu](mailto:engrhel@usc.edu)

## **Course Description**

The role of enterprise resource planning systems (ERPs) in an organization and the task of implementing and managing the IS function.

## Course Overview

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, homework 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 Enterprise 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.

## Learning 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
  - Sales
  - 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

## Course Notes

All course materials will be made available through Desire2learn (D2L), USC DEN's learning management system. D2L discussion forums, chat, conferencing will be used for out-of-class discussions. Lectures are delivered face to face in classroom. They are also available as webcasts through D2L. <http://courses.uscden.net>

## Technology Proficiency and Hardware/Software Required

- SAP is the leading vendor of Enterprise Resource Planning Systems in the world. USC Viterbi has had an Academic Alliance with SAP University Alliances Program for the past 18 years. Several Viterbi ISE and ITP courses utilize the SAP system as a tool and platform for class Homework.
- Students will receive software (SAP GUI for both Windows and MAC) to connect to the SAP ECC 6.0 server so that they can work from their personal computers.
- You will also need Microsoft Excel and Access for analyzing the data from the ERPSimulation Game.

## Required Reading and Supplementary Materials

- ERP Simulation Game: *Participant's Manual* (ebook) will be available for purchase online (cost \$43 CAD payable online by credit card, details to be announced during lecture)

## Description and Assessment of Assignments

**Homework** – Most homework is computer based. Homework should be turned in to D2L on time. Grading will be based on completeness, accuracy, and correctness. Feedback will be provided through D2L.

**Exams** – are written, in-class tests. They are based on concepts and not on particular tools.

**Simulation Game** – An ERPSimulation Game will be played during three lectures towards the end of the semester (see Lecture schedule section of this syllabus). Game can be played remotely by off-campus students. Participation in the game is **mandatory** for all students. If students have a conflict with the class time on game days, please reconsider your enrollment in this course.

## Grading Breakdown

The weight of graded material during the semester is listed below.

Homework	25%
Midterm Exam	25%
ERPSim Game	
Peer evaluation (individual)	5%
Game performance (team)	5%
Mid-game analysis (individual)	5%
Final Game Analysis (team)	5%
Final Exam	30%
Total	100%

The following shows the grading scale to be used to determine the letter grade.

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

## Assignment Submission Policies

It is the responsibility of the student to make sure case studies and assignment are turned in on time. Make sure you follow the procedures outlined in each assignment (D2L submissions).

Late assignment submissions will be subject to a late penalty of 25% per day. No assignments will be accepted later than four days from the due date.

## **Additional Policies**

No make-up exams (except for documented medical or family emergencies) will be offered nor will there be any changes made to the Final Exam schedule, except as permitted by university rules.

Lecture attendance is not mandatory however it is recommended that students not miss any lecture.

## **Incomplete and Missing Grades**

Excerpts for this section have been taken from the University Grading Handbook, located at <http://www.usc.edu/dept/ARR/grades/gradinghandbook/index.html>. Please see the link for more details on this and any other grading concerns.

A grade of Missing Grade (MG) “should only be assigned in unique or unusual situations... for those cases in which a student does not complete work for the course before the semester ends. All missing grades must be resolved by the instructor through the Correction of Grade Process. One calendar year is allowed to resolve a MG. If an MG is not resolved [within] one year the grade is changed to [Unofficial Withdrawal] UW and will be calculated into the grade point average a zero grade points.

A grade of Incomplete (IN) “is assigned when work is no completed because of documented illness or other ‘emergency’ **occurring after the twelfth week** of the semester (or 12<sup>th</sup> week equivalency for any course scheduled for less than 15 weeks).”

# Enterprise Wide Information Systems

## ISE 583 (3 units)

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### Lecture Schedule

May 19<sup>th</sup> - Introduction

- Course Overview
- Discussion of database applications
- Business function vs business process
- Introduction to Enterprise Resource Planning (ERP)
- Examples of ERP – SAP
- Client/Server Technology, 2 Tier, 3 Tier, n Tier
- Getting Started with SAP
- Introduction to case company

#### Homework 1: SAP Environment

May 24<sup>th</sup> - Accounting

- Financial Accounting basics – Balance sheet, Profit and Loss Statement
- General Ledger, Chart of Accounts
- Posting financial transactions, A/R and A/P accounts
- Controlling – Cost centers and cost elements
- Allocating Costs – Assessments and distributions

#### Homework 2: Accounting

May 26<sup>th</sup> - Procurement Process

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

#### Homework 3: Purchasing Cycle

May 31<sup>st</sup> - Sales Process

- Sales and fulfillment cycle
- Master Data and its role in ERP systems
- Creating customer master data, material master data and pricing conditions
- Implementing a Sales Cycle

#### Homework 4: Sales Cycle

June 2<sup>nd</sup> - Production Process: Planning and control

- Creating a production plan (from forecasting etc.)
- MRP – Materials requirement planning

- Independent and dependent materials requirements
- Creating Production orders and schedules
- Bill of Materials
- Executing a Production process
- Inventory and Goods movement
- Routing and work centers
- Costing

### **Homework 5: Production**

June 7<sup>th</sup> - **Midterm Exam (90 mins), Lecture follows**

- Goals of the ERP Simulation Game
- Game description
- Analyzing data from the game
- Producing Profit and Loss statements for the company

June 9<sup>th</sup> - ERPSim Game Day: Introductory Game – Rounds 1,2,3, Lecture follows

- How the market works, dynamic commodity demand and supply
- Planning and forecasting for procurement and production
- Costing, accounting, liquidity planning
- Interest and warehouse costs
- Production improvement
- Marketing impact
- Strategy for Extended game

### **Intro Game Analysis**

June 14<sup>th</sup> - ERPSim Game Day: Extended Game – Rounds 1-4

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

June 16<sup>th</sup> - ERP Simulation Game: Extended Game - Rounds 5-8

- ERPSim contest
- Playing the simulation game in real time as the market fluctuates
- Analysis of the entire game/market

June 21<sup>st</sup> - Extended Game Analysis

June 23<sup>rd</sup> – **Final Exam 2:30 – 4:30 pm**

June 28<sup>th</sup> - Game Analysis due

## Statement on Academic Conduct and Support Systems

### Academic Conduct

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Section 11, *Behavior Violating University Standards*<https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct/>.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* <http://equity.usc.edu/> or to the *Department of Public Safety* <http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us>. This is important for the safety whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* <http://www.usc.edu/student-affairs/cwm/> provides 24/7 confidential support, and the sexual assault resource center webpage [sarc@usc.edu](mailto:sarc@usc.edu) describes reporting options and other resources.

### Support Systems

A number of USC’s schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* [http://sait.usc.edu/academicsupport/centerprograms/dsp/home\\_index.html](http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html) provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* <http://emergency.usc.edu/> will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.