## Enterprise Wide Information

## Systems

## ITP 320 (4 Units) – Spring 2018

**Course 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, homework will be assigned that give 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.

**Objectives**

At the completion of the course, students will be able to

* Describe how ERP systems use relational databases to store, manipulate, retrieve and present business data
* 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
	+ Accounting
	+ Sales
	+ Procurement
	+ Materials Management
	+ Production
* Strategize pricing, production, distribution and sales in a competitive commodity market
* Analyze sales data in an ERP to dynamically respond to changing market conditions to maximize profits
* Expedite procurement 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

**Prerequisites**

None

**Lectures and Lab**

Morning Section: Mondays and Wednesdays 10:00AM to 11:50AM in KAP 156

**Instructor**

Mike Lee

Email: mikelee@usc.edu

Professor Office Hours: See <http://bit.ly/professorlee>

**Teaching Assistant**

Yash Damania - damania@usc.edu & Steven Pham (stevennp@usc.edu)

TA Office Hours: See <http://bit.ly/professorlee>

**Website**

blackboard.usc.edu

Course readings and assignments will be posted on Blackboard. Students should check for materials, deadlines, announcements regularly on Blackboard.

Information posted on blackboard will supersede information contained in this syllabus.

**Textbook**

Business Process Integration with SAP ERP, © 2013, by Simha R. Magal and Jeffrey Word, Wiley, ISBN: 978-0-0856008-2-2. Purchase ebook here <http://store.epistemypress.com/books/bpi.html>

ERP Simulation Game: Participant’s Manual (ebook) will be available for purchase online (cost $50 CAD payable online by credit card, details to be announced mid semester)

**Software**

SAP is the leading vendor of Enterprise Resource Planning Systems in the world. ITP/USC has had an Academic Alliance with SAP University Alliances Program for the past 20 years. Several ITP courses utilize the SAP system as a tool and platform.

Students will receive software (SAP GUI for both Windows and MAC) to connect to the **SAP ECC** server so that they can work from their own computers. ITP labs have the GUI pre-installed.

Microsoft Excel and Access.

VDI – VIRTUAL DESKTOP

All software can also be access to Virtual Desktop by logging in at: <http://mydesktop.vlabs.usc.edu>

OPEN LAB HOURS

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. Hours are listed at: <https://itp.usc.edu/current-students/open-lab-schedule/>.

**Simulation Game**

An ERPSimulation Game will be played during lec/lab towards the last 5-6 weeks of the semester. Participation in the game is **mandatory** for all students. **All students must bring their laptops to class.**

**Grading**

The course is graded with the following weights:

Participation 5%

Quiz 5%

Fundamentals

Homework (6 assignments) 25%

Exam I - Fundamentals 20%

ERPSim Game

Peer Evaluation (individual) 5%

Game Performance (team) 5%

Intro Game Analysis (individual) 5%

Final Game Analysis (team) 5%

Exam II 20%

Final Summary 5%

TOTAL POSSIBLE 100%

The following grading scale will be used to determine your 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*

**Course Policies**

**Exams**

* The use of mobile devices, books, notes or computers is not permitted during the exam.
* No make-up exams will be offered except for documented medical or family emergencies.

**Homework**

* Students are encouraged to work with their classmates. However, students must turn in their own original work.
* Late homework submissions will be subject to a late penalty. The penalty is **25% per day**. No assignments will be accepted later than four days from the due date.
* All assignments must be submitted to Blackboard.

**Virtual Labs/Open Labs**

* Before logging off a computer, students must ensure that they have saved their work. 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.

**Course Outline**

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| --- | --- | --- |
| **Date** | **Topic(s)** | **Reading/Homework** |
| 1/8 | **Intro: Course Overview*** Gateway to the Big 4
* Great Companies
* Course Overview
* Introduce Yourself
 |  |
| 1/10 | **Business Organizations & Technology Strategy*** Large Company Organizational Structure
* CIO Organizational Structure
* Consulting Mindset
* Technology Strategy Approach
* Career and Recruitment Strategy
 |  |
| 1/15 | **NO CLASS – LABOR DAY** |  |
| 1/17 | **ERP Basics*** Discussion of database applications
* Understanding the difference between Business function and business process
* Overview of Enterprise Resource Planning (ERP)
* Client/Server Technology, 2 Tier, 3 Tier, N Tier
* Examples of ERP – SAP
	+ Getting Started with SAP
* Quiz Review

**BRING LAPTOPS – YOU WILL LOG IN TO SAP** | **Reading Assignment:** Chapter 1: Simha**Homework 1: ERP Environment** Explore the client/server architecture of SAP. Learn how to use the user interface. |
| 1/22 | **Quiz – Career, Organizations & Strategy*** Career and Recruitment Strategy
* Structure of organizations
* Mindsets and processes

**Accounting: Financial Accounting*** Understanding Generally Accepted Accounting Principles GAAP
* A quick overview of Accounting basics – Double entry accounting, debit and credit, T-accounts, Chart of Accounts, Balance sheet, Profit and Loss Statement,
* Posting financial transactions
 | **Reading Assignment:**Chapter 3: Simha**Homework 2: Accounting**Post financial transactions and then see their effect on Balance Sheet and Profit/Loss Statement. Post an expense and then allocate those costs to cost centers. |
| 1/24 | **Accounting: Managerial Accounting*** Controlling – Cost centers and cost elements
* Allocating Costs – Assessments and distributions
 | **Reading Assignment:** Chapter 3: Simha |
| 1/29 | **Sales Process*** Your Case Company: Global Bike, Inc
* Sales and fulfillment process
* Master Data and its role in ERP systems
* Creating customer master data, material master data and pricing conditions
 | **Reading Assignment:** Chapter 5: Simha**Homework 3: Sales Cycle**Create customer, material master data. Execute the Sales process in SAP. |
| 1/31 | **Sales Process*** Executing a Sales Cycle
* Difference between transactional data and master data
* Reportingand analysis of sales data
 | **Reading Assignment:** Chapter 5: Simha |
| 2/5 | **Procurement Process*** Forecasting raw material requirements using sales information, production requirements, sales forecast
* Difference between purchase requisitions and purchase orders
* How to source materials
* Vendors and pricing conditions
* Type of goods movement. Receiving goods into inventory
 | **Reading Assignment:** Chapter 4: Simha**Homework 4: Purchasing Cycle**Create vendor, material master data for purchasing. Execute the Purchasing process in SAP. |
| 2/7 | **Procurement Process*** Executing the Purchasing Cycle
 | **Reading Assignment:** Chapter 4: Simha |
| 2/12 | **Materials Management*** Creating a production plan (from forecasting etc.)
* What is MPS? Master Production Schedule
* What is MRP? How does MRP calculate material requirements – Materials Requirement Planning
 | **Reading Assignment:** Chapter 8: Simha**Homework 5: Materials Planning**Create master data to support the production cycle. Generate historical consumption data which will be used to forecast future demand. Create a sales forecast. Create a production schedule using the sales forecast and safety stock. |
| 2/14 | **Materials Management*** Independent and dependent materials requirements
 |  |
| 2/19 | **NO CLASS – PRESIDENT’S DAY** |  |
| 2/21 | **Production Process: Planning and Execution*** Master data needed for production
	+ Bill of Materials
	+ Work Centers
	+ Routings
* Creating Production orders
* Releasing and confirming production orders
 | **Reading Assignment:** Chapter 6: Simha**Homework 6: Production Cycle**Execute the production cycle to produce finished goods. Compute actual costs. |
| 2/26 | **Production Process*** Executing a Production process
* Monitoring Inventory and Goods movement
 |  |
| 2/28 | **Exam Review & Homework Lab** |  |
| 3/5 | **Exam I** |  |
| 3/7 | **ERP Simulation Game – Intro Game Lecture*** Goals of the ERP Simulation Game
* Game description
* Goals of the ERP Simulation Game
* Game description
* How the market works, dynamic commodity demand and supply
* Teams and roles
 | **Reading Assignment:** ERPSim Website**SELECT TEAMS** |
| 3/123/14 | **NO CLASS – SPRING BREAK** |  |
| 3/19 | **ERP Sim – Intro Game – Round 1*** Introductory game
 | **Reading Assignment:** ERPSim Website |
| 3/21 | **ERP Sim – Intro Game – Rounds 2, 3*** Introductory game
* Analyzing data from the game
* Analyzing Profit and Loss statement for the company
 | **ERPsim Homework:** Intro Game Analysis |
| 3/26 | **ERP Sim – Extended Game Lecture*** Description of variables and constraints in the extended game
* Role of team members in the game
* Planning and forecasting for procurement, production and distribution
* Strategies for maximizing profits
* Interest and warehouse costs
 | **Reading Assignment:** ERPSim Website |
| 3/28 | **Team Strategy Sessions*** Team organization Define your beginning game strategy
* Research & development
* Pricing and marketing strategy
* Production strategy
 | **Reading Assignment:** ERPSim Website |
| 4/2 | **ERP Sim – Extended Game - Rounds 1, 2, 3*** Extended ERPSim contest
* Playing the simulation game in real time as the market fluctuates
 | **Reading Assignment:** ERPSim Website |
| 4/4 | **ERP Sim – Extended Game - Rounds 4, 5, 6*** Extended ERPSim contest
* Playing the simulation game in real time as the market fluctuates
 | **Reading Assignment:** ERPSim Website |
| 4/9 | **ERP Sim – Extended Game - Rounds 6, 8, 9*** Extended ERPSim contest
* Playing the simulation game in real time as the market fluctuates
 | **Reading Assignment:** ERPSim Website |
| 4/11 | **ERP Sim – Extended Game - Rounds 9, 10, 12*** Extended ERPSim contest
* Playing the simulation game in real time as the market fluctuates
* Analysis of the entire game/market
 | **ERPsim Homework:** Extended Game AnalysisPeer Evaluation |
| 4/16 | **Exam II Review** |  |
| 4/18 | **Enterprise Systems Topics & Final Summary*** Careers in Enterprise Systems
* Minor & Specialization
* Related programs at USC
* Final Summary Overview
 | **Final Summary:** Assigned. Due 5/4. |
| 4/23 | **ERP Sim – Team Presentations*** Strategy & Results Presentations
 |  |
| 4/25 | **Exam II** |  |

**Final Summary Due: May 4**

Note that “Simha” refers to *Business Process Integration with SAP ERP* and “ERPSim Guide” refers to *ERP Simulation Game: Participant’s Manual*.

Homework dates listed above are the assignment dates. Homework due dates will be posted on Blackboard.

**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 not completed because of documented illness or other ‘emergency’ **occurring after the twelfth week** of the semester (or 12th week equivalency for any course scheduled for less than 15 weeks).”

**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 your course instructor (or TA) as early in the semester as possible. If you need accommodations for an exam, the form needs to be given to the instructor at least two weeks before the exam.

DSP is located in STU 301 and is open from 8:30am to 5:00pm, Monday through Friday. Contact info: 213-740-0776 (Phone), 213-740-6948 (TDD only), 213-740-8216 (FAX), ability@usc.edu, <http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html>.

**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/>

**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 Part B, Section 11, “Behavior Violating University Standards” <https://policy.usc.edu/scampus-part-b/>. 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 describes reporting options and other resources.

## Support Systems

***Student Counseling Services*** *(SCS) - (213) 740-7711 – 24/7 on call*

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. https://engemannshc.usc.edu/counseling/

***National Suicide Prevention Lifeline*** *- 1-800-273-8255*

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. http://www.suicidepreventionlifeline.org

***Relationship and Sexual Violence Prevention Services (RSVP)*** *- (213) 740-4900 - 24/7 on call*

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. https://engemannshc.usc.edu/rsvp/

***Sexual Assault Resource Center***

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: http://sarc.usc.edu/

***Office of Equity and Diversity (OED)/Title IX Compliance*** *– (213) 740-5086*

Works with faculty, staff, visitors, applicants, and students around issues of protected class. https://equity.usc.edu/

***Bias Assessment Response and Support***

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. https://studentaffairs.usc.edu/bias-assessment-response-support/

***The Office of Disability Services and Programs***

Provides certification for students with disabilities and helps arrange relevant accommodations. http://dsp.usc.edu

***Student Support and Advocacy*** *– (213) 821-4710*

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. https://studentaffairs.usc.edu/ssa/

***Diversity at USC***

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. https://diversity.usc.edu/

***USC Emergency Information***

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible, http://emergency.usc.edu

***USC Department of Public Safety*** *– 213-740-4321 (UPC) and 323-442-1000 (HSC) for 24-hour emergency assistance or to report a crime.*

Provides overall safety to USC community. <http://dps.usc.edu>