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| **Vert_Formal_Viterbi_CardOnTrans** | Configuring Enterprise Resource Planning SystemsITP 422 (3 Units) Spring 2016 |
| **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. |
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| **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 model company from the ground up.*** |
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| **Prerequisite** | ITP 320 |
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| **Instructor** | Nitin Kalé, Associate ProfessorInformation Technology Program andDaniel J. Epstein Department of Industrial and Systems Engineeringkale@usc.edu | OHE 412 | 213.740.7083 |
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| **Office Hours** | 2-4 Wednesday in OHE 4123-5 Thursday, online <https://bluejeans.com/351861442> |
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| **Lecture/Lab** | 2 – 4:50 p.m. Monday | OHE 540 |
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| **Grader and Lab Assistants** | Zheqing Min (Andy), zmin@usc.edu Pallavi Malhotra pmalhotr@usc.edu |
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| **Course Website** | All course materials will be posted on blackboard.usc.edu. You are expected to check Blackboard for updates routinely. You can change Blackboard notification to suit your notification needs. |
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| **Textbook** | Integrated Business Processes with ERP Systems, © 2011, by [*Simha R. Magal*](http://www.wiley.com/WileyCDA/Section/id-302475.html?query=Simha+R.+Magal) *and* [*Jeffrey Word*](http://www.wiley.com/WileyCDA/Section/id-302475.html?query=Jeffrey+Word), Wiley, ISBN-10: 0470478446, ISBN-13: 978-0470478448. Purchase hard cover from USC bookstore or ebook here <http://www.amazon.com/Integrated-Business-Processes-ERP-Systems/dp/0470478446> |
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| **Software** | This course uses **SAP ECC 6.04** 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. |
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| **Grading** | The weight of graded material during the semester is listed below. ***No extra credit assignments will be offered.*** Homework 30%Final Project 10%Exam I 30%Exam II 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* |
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| **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.
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| **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> |
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| **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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| **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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| **Emergency Preparedness/Course Continuity in a Crisis** | In case of emergency, when travel to campus is difficult, if not impossible, USC executive leadership will announce a digital way for instructors to teach students in their residence halls or homes using a combination of the Blackboard LMS (Learning Management System), teleconferencing, and other technologies. Instructors should be prepared to assign students a “Plan B” assignment that can be completed ‘at a distance.’ For additional information about maintaining your classes in an emergency, please access: <http://cst.usc.edu/services/emergencyprep.html> |
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| **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 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>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/*](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. |

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| Configuring Enterprise Resource Planning SystemsITP 422 (3 Units) |
| **Course Outline** |
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| Jan 11th - 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.* |
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| Jan 18th **-** Holiday |
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| Jan 25th - 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* |
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| Feb 1st – 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* |
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| Feb 8th – 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* |
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| Feb 15th **-** Holiday |
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| Feb 22nd – 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.* |
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| Feb 29th - 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* |
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| **March 7th – Exam I** |
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| March 14th – Spring Recess |
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| March 21st - 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* |
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| March 28th - Production Planning |
|  | * Production Forecasting
* Sales and operations planning
* Demand Management

*Homework – Elements of production planning. Configure demand management to automate planning* |
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| April 4th - 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.* |
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| April 11th 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* |
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| April 18th Expanding the case company |
|  | * Additional production
* New customers and products
* Expanded accounting
* Testing business processes

*Final Project* |
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| **April 25th – Exam II** |
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| Final Project due |