## Approval

**Name of Proposal:** IS 440

**Submitted by:** James Lee  
**Signature:** [Signature]

**Date:** 25 October 2011

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Recommendation/Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Vote: For 7, Against 0, Abstain 0, Absent 0</td>
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<tr>
<td>1. Approved by Department</td>
<td><strong>Signature:</strong> [Signature]</td>
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<td><strong>Chair:</strong> James Lee</td>
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<td>10/25/2011</td>
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<td>2. Approved by College</td>
<td><strong>Signature:</strong> [Signature]</td>
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<tr>
<td><strong>Dean:</strong> Glade Tew</td>
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<td>10/26/11</td>
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<td>3. Reviewed by LAS (if new resources are requested)</td>
<td><strong>Signature:</strong> LAS: N/A</td>
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<td>4. Approved by General Education (if any GE course is affected)</td>
<td><strong>Signature:</strong> GE: N/A</td>
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<td>5. Approved by University Curriculum Committee</td>
<td><strong>Signature:</strong> UCC: Jennifer Lane</td>
<td>11/8/11</td>
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<td>6. Approved by Academic Council</td>
<td><strong>Signature:</strong> AVP: Max Checketts</td>
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<tr>
<td>7. Approved by the President's Council (for new programs)</td>
<td><strong>Signature:</strong> Pres: Steven Wheelwright</td>
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Section 2 – Overview

Summary: This proposal seeks to create a new course within the Computer and Information Sciences (CIS) Department, IS 440: Advanced Topics in SAP. The course will be offered in the semester/term prior to the SAP TERP10 Certification Course. The course will have a significant hands-on component using SAP, the world leader in enterprise resource planning systems. This will be the fifth course taught at BYU-Hawaii using SAP and its focus will be preparing students to take the TERP10 exam offered by SAP.

Background: BYU Hawaii became a member of the SAP University Alliances (SAPUA) program in January 2009. SAP is the world-wide leader in the sales of enterprise resource planning systems software and the demand for SAP professionals currently exceeds the supply, especially in our target areas. According to Nathan Henderson, an executive at SAP, there were over 10,000 unfilled positions in Asia in 2009. Based on conversations with representatives from the Big Four accounting firms, it is clear that SAP experience on a resume would attract attention from these firms and from many other organizations with SAP consulting practices. SAP skills appear to be in high demand, even in a down economy.

As part of our membership in the SAPUA program, our students are eligible to receive the SAP University Alliances Student Recognition Award if they successfully complete three courses with a 30% or higher hands-on SAP component. We currently have four courses that meet this requirement: Acct 356, IS 430, IS 435, and IS 485. IS 440 will give us a fifth course and provide the students with more options for completing the three courses. An additional benefit to our students of completing three SAP related courses is that they will then be eligible to receive training for and take the TERP10 Certification exam. SAP requires all individuals working as SAP professionals to have TERP10 certification before they can complete any other SAP certification programs. BYUH students successfully passing the SAP TERP10 certification exam would be very desirable to potential employers.

Course Description: IS 440 builds on the concepts taught and the skills developed in the other SAP related courses at BYU-H. Students will be given a broad overview of the SAP ERP system and how it is used by organizations around the world. Each student will complete hands-on exercises in many of the SAP modules including Production Planning, Sales & Distribution, Materials Management, Human Resources, Financial Accounting, and Controlling.

IS 440 will be a senior level elective course for students in all CIS degree programs (Computer Science, Information Systems, and Information Technology). In addition, because of the high demand for SAP experience, it will likely be taken by many students in other degree programs within the College of Business, Computing and Government such as Accounting and Business Management. The prerequisites for IS 440 are IS 430 and the completion of one or more of the other SAP related courses: Acct 356, IS 435, and IS 485. The course will initially be offered during Summer I and could be offered more often, if there is enough student demand for the course.

Changes in Expected Teaching Load: The teaching load of CIS faculty will not need to increase to offer IS 440.
Section 4 - Course Proposal

Upon approval, the information presented on this course proposal sheet will become binding on the department and the university. Any material changes require a new course proposal.

Effective Date: added to the catalog immediately upon approval and taught for the first time in Summer I, 2012

College: Business, Computing and Government

Course Prefix: IS

Course Number: 440

NEW COURSE

Full Title: Advanced Topics in SAP ERP Systems

Short Title (for Transcript, 30-char max): Advanced Topics in SAP

Catalog Entry (50-word recommended maximum):

440. Advanced Topics in SAP. (3) (Su1) Students learn advanced topics related to the SAP enterprise resource planning (ERP) system such as production planning, materials management, sales and distribution, and human capital management. Students will complete several hands-on exercises using the SAP ERP system. (Prerequisites: IS 430 and one of the following: ACCT 356, IS 435, IS 485)

Prerequisites: IS 430 and one of the following: ACCT 356, IS 435, IS 485

Credit Hours: 3

Grading Method: Letter grades will be assigned from A - F

Course Fees: None

Learning Objectives: Each student who passes this course will be able to do the following:

- Identify the various organizational levels in SAP and their functions.
- Understand the function of SAP master data.
- Understand the function of SAP transactional data.
- Discuss the evolution of the SAP ERP software.
- Identify the four main components of SAP NetWeaver.
- Understand the SAP procurement process.
- Understand the function of financial accounting and management accounting in SAP.
- Understand MRP and the materials planning process in SAP.
- Understand the SAP Product Lifecycle Management process.
- Identify the SAP manufacturing execution process.
- Understand the concepts of inventory and warehouse management in SAP.
- Identify the SAP sales order management process.
- Understand the corrective maintenance process in SAP Enterprise Asset Management.
- Understand the SAP customer service process.
- Identify the various components of project systems in SAP.
- Understand Human Capital Management in SAP.
- Describe the function of Business Intelligence in SAP.
- Identify key integration points between SAP components.
- Understand the reporting tools in SAP.
**Assessment Methods:** Students will be assessed with a combination of exams, quizzes, computer exercises, and class participation. The breakdown will be as follows:

- Final Exam: 20%
- Midterm Exam: 20%
- Attendance/Participation: 10%
- Quizzes: 10%
- SAP exercises: 40%

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Sample Syllabus:

Advanced Topics in SAP
Course Outline

Course Information
Title: Advanced Topics in SAP
Number: IS 440
Credit hours: 3
Prerequisites: IS 430 and one of the following: ACCT 356, IS 435, IS 485

General Course Description
IS 440 builds on the concepts taught and the skills developed in the other SAP related courses at BYU-H. Students will be given a broad overview of the SAP ERP system and how it is used by organizations around the world. Each student will complete hands-on exercises in many of the SAP modules including Production Planning, Sales & Distribution, Materials Management, Human Resources, Financial Accounting, and Controlling. For students planning to take the SAP TERP10 certification exam, IS 440 will help prepare them for the rigorous two-week training course offered by SAP.

Course Materials
There is not a required textbook for this class, however, there are several PowerPoint presentations that will be provided via Blackboard and other online materials that will be required reading throughout the course. There are optional textbooks that can be reviewed by the students.

Students will use the SAP ECC 4.04 client software to connect to the SAP servers at California State University, Chico. The client software will be available in the classroom and in GCB 111 during open lab time in the evenings, M-F and will also be available for installation on student computers at no charge.

Expected Learning Outcomes
Each student who passes this course will be able to do the following:
- Identify the various organizational levels in SAP and their functions.
- Understand the function of SAP master data
- Understand the function of SAP transactional data.
- Discuss the evolution of the SAP ERP software.
- Identify the four main components of SAP NetWeaver.
- Understand the SAP procurement process.
- Understand the function of financial accounting and management accounting in SAP.
- Understand MRP and the materials planning process in SAP.
- Understand the SAP Product Lifecycle Management process.
- Identify the SAP manufacturing execution process.
- Understand the concepts of inventory and warehouse management in SAP.
- Identify the SAP sales order management process.
- Understand the corrective maintenance process in SAP Enterprise Asset Management.
- Understand the SAP customer service process.
- Identify the various components of project systems in SAP.
- Understand Human Capital Management in SAP.
- Describe the function of Business Intelligence in SAP.
- Identify key integration points between SAP components.
- Understand the reporting tools in SAP.
Performance Evaluation:
Your final grade for this class will be based on the following point allocation:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>SAP Exercises</td>
<td>400</td>
</tr>
<tr>
<td>Quizzes</td>
<td>100</td>
</tr>
<tr>
<td>Attendance/Participation</td>
<td>100</td>
</tr>
<tr>
<td>Midterm exam</td>
<td>200</td>
</tr>
<tr>
<td>Final examination</td>
<td>200</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1000</strong></td>
</tr>
</tbody>
</table>

Grades will be assigned based on the following cumulative scores:

- A  94.00% to 100%
- A- 90.00% to 93.99%
- B+ 86.00% to 89.99%
- B  82.00% to 85.99%
- B- 79.00% to 81.99%
- C+ 76.00% to 78.99%
- C  72.00% to 75.99%
- C- 69.00% to 71.99%
- D+ 66.00% to 68.99%
- D  62.00% to 65.99%
- D- 59.00% to 61.99%
- F  58.99% or less

Teaching Approach
This course will be taught using a combination of lectures, readings, hands-on lab exercises, and a business simulation using ERPsim. All of the course materials will be available via Blackboard. Lab assignments are designed to give students exposure to different software tools and to reinforce concepts from the lectures and the readings. The lab assignments will not only measure how well you have learned the material, but will also help solidify your understanding of the material and encourage further exploration and learning. Your success in this class depends upon your attendance and successfully completing each SAP exercise.

Attendance/Participation and Quizzes
Attendance will be taken each day at the beginning of class. Quizzes will be given throughout the semester and cannot be made up. Attendance/Participation will count as 10% (100 points) of your grade for the class and Quizzes will count as an additional 10% (100 points). You are expected to be prepared for each class by doing the assigned reading and coming to class with questions from your readings. Proper preparation before class will allow you to better participate in class discussions and to better learn the materials for each section. Instructions for lab assignments will be given during class and many of the assignments can be completed during class.

Exams:
There will be a midterm exam and a final exam. The exams will cover class lectures and required readings and are each worth 200 points. Exams must be taken at the scheduled time. Make-ups will NOT be allowed without prior approval. Verifiable medical emergencies, brought to my attention in advance of the exam, are an example of an exception for making up an exam.
SAP Exercises

Several SAP exercises will be completed throughout the course to emphasize the material covered in class. These exercises are evenly distributed throughout the semester. Each exercise is due at the beginning of class on the assigned date. An exercise may be turned in one day late for 50% credit. No credit will be given for submissions more than 24 hours after the due date/time.

Student Responsibility

1. You are expected to attend lecture regularly! Important information will likely be conveyed to you during lectures. It is your responsibility to make sure you are current with course happenings. If you must miss a class, it is your responsibility to cover any missed material with one of your classmates.
2. All assignments must be completed and submitted according to the instructions provided. Failure to follow instructions may result in a grade of zero.
3. Hardware failure or inaccessibility is not a valid excuse for late work. This means that if the computer eats your assignment, or if the labs are full, you will not be excused from handing in an assignment late.
4. Missed exams receive a grade of zero.

You must inform me of any special circumstances that might prevent you from completing course requirements on time.

Schedule

The schedule is subject to change and will be reviewed at the start of each class period:

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Topic</th>
<th>Assignments</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td></td>
<td>Intro to Business Processes and Enterprise Systems</td>
<td></td>
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<tr>
<td>2</td>
<td></td>
<td>Intro to ERP Concepts / SAP NetWeaver</td>
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<tr>
<td>3</td>
<td></td>
<td>Financial Accounting</td>
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<tr>
<td>4</td>
<td></td>
<td>Managerial Accounting</td>
<td></td>
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<tr>
<td>5</td>
<td></td>
<td>SAP Procurement Process</td>
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<tr>
<td>6</td>
<td></td>
<td>SAP Sales Fulfillment Process</td>
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<td>7</td>
<td></td>
<td>SAP Materials Planning</td>
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<td>8</td>
<td></td>
<td>SAP Product Life Cycle Management</td>
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<td>9</td>
<td></td>
<td>SAP Production Process</td>
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<tr>
<td>10</td>
<td></td>
<td>SAP Inventory and Warehouse Management</td>
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<td>11</td>
<td></td>
<td>SAP Enterprise Asset Management</td>
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<tr>
<td>12</td>
<td></td>
<td>SAP Project Systems</td>
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<tr>
<td>13</td>
<td></td>
<td>SAP Human Capital Management</td>
<td></td>
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<tr>
<td>14</td>
<td></td>
<td>SAP Business Intelligence</td>
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91. Personal Productivity with IS Technology (0) (all semesters) Online instruction in personal productivity concepts and skills using e-mail, word processing, spreadsheet, database, presentation graphics, web browsing, and the Internet.

330. Management Information Systems (3) (1st, F, W, Sp) Manager’s use of information technology to support decision making at all levels. Integrates and uses management functions, computer databases, accounting principles, model building and graphical representation. (Prerequisite: B- or better in CIS 100 or Business Core.)

350. Database Management Systems (3) (F, W) Introduction to design and implementation of database management systems. Emphasis on data structures, normalization of data, data modeling, and database methods. (Prerequisite: CIS 101.)

390R. Special Topics in Information Systems (1-3) (Variable).

399R. Internship in Information Systems (1-12) (Variable) Students may receive credit for applied experience in information systems. Prior approval must be obtained and a program coordinated by a faculty member and the on-site supervisor. (Prerequisite: Permission of the instructor.)

400. Information Systems Proficiency (0) (F,W,Sp,Su) Students demonstrate proficiency at important Information Systems skills by examination. This qualifies them to enter the IS capstone experience.

430. Foundations in IT Services, Enterprise Systems, and ERP Skills (3) (F, W) Students learn principles of IT Services and enterprise systems that dramatically impact enterprise business processes; including IT components, architecture, interconnections, best practices, and ERP skills. (Prerequisite: Junior or Senior standing and acceptance into one of the CIS, Business or Accounting degree programs)

435. Advanced Concepts in Enterprise Resource Planning (ERP) Systems (3) (W) Students learn advanced concepts related to enterprise resource planning (ERP) systems such as data warehousing, business intelligence and business process management. Students will complete several hands-on exercises using the SAP ERP system and other related software tools. (Prerequisite: IS 430.)

440. Advanced Topics in SAP ERP Systems (3) (Su1) Students learn advanced topics related to the SAP enterprise resource planning (ERP) system such as production planning, materials management, sales and distribution, and human capital management. Students will complete several hands-on exercises using the SAP ERP system. (Prerequisites: IS 430 and one of the following: ACCT 356, IS 435, IS 485)