ISOM4740 Enterprise Resource Management
Fall 2020

Department of Information Systems, Business Statistics and Operations Management

COURSE

ISOM4740 Enterprise Resource Management (3-0-0:3)
This course introduces the basic concepts and practices of enterprise resource management. Popular enterprise resource planning software packages are used for discussing and building integrated business solutions.

Fall 2020
Zoom meeting time: Tuesday, 12–2:50 pm
(Please access via Canvas > Zoom Meeting during the class time for live streaming and recording of class meeting videos)

This course will use a blended learning approach and most lectures are delivered in video format or during the class time using Zoom. You do not need to be present on campus to take this course and to take the exam.

INSTRUCTOR

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TEXTBOOK

No required textbook; learning materials will be posted on Canvas.

GRADING POLICY

Final course grade will be determined by the following criteria and point distribution.

Online quizzes / Participation	20
Case analyses	10
Lab exercises	20
ERP simulation games	10
Final exam	40
Total	100

Each online quiz needs to be completed by 23:59 on the date as indicated on the syllabus. You can top up your online quiz score with participation, which is determined primarily by your contribution to class discussions (during the live streaming of the class) and the active use of Discussions in Canvas. The top up points will be awarded according to the relevance, quality, and pattern of your contributions. The maximum total points for quiz plus participation will be 2 points per week or 20 points for the entire term.

COURSE GOALS*

1. Compare the strategic values and limitations of enterprise systems. (PILO-1)
2. Discuss the basic concepts and practices of process-oriented management in a global, competitive environment. (PILO-3)
3. Define the skills and knowledge to successfully implement an enterprise system in organizations. (PILO-4)
4. Identify the new development of ERP software and applications for facilitating e-business. (PILO-7)
5. Demonstrate examples of business process integration through the use of ERP core applications and modules. (PILO-3, 7)
6. Identify the tangible benefits of enterprise integration for decision making using ERP in a simulated environment. (PILO-3, 7)

SPECIFIC KNOWLEDGE AND SKILLS DEVELOPED

By completing this course, you should be able to:

1. Describe the information systems evolution and its impacts on the development of ERP systems in global businesses as well as local small businesses.
2. Differentiate a business process from a business function.
3. Identify the kinds of data and information that each major functional area produces and needs.
4. Describe the benefits and limitations of system integration.
5. Compare and contrast different ERP architectures (including three-tier, web-based, and service oriented).
6. Explain why ERP system implementations often incorporate process redesign and industry best practices.
7. Construct a process flow diagram for major business processes.
8. Compare and contrast different enterprise system implementation strategies and processes.
9. Determine and analyze the total cost of ownership and vendor selection based on financial criteria such as net present value (NPV) and internal rate of return (IRR).
10. Describe how open source, SOA and SaaS will impact the future development of enterprise systems.
11. Describe the major functions and benefits of customer relationship management (CRM) and supply chain management (SCM) software, as an extension of ERP software.
12. Solve a material requirements planning (MRP) problem by determining the timing and quantity requirements for each material.
13. Perform proficiently an integrated business process involving sales and distribution, production planning and control, purchasing, warehouse management, and financial transactions using the ERP system.
14. Define the security, ethical, and legal issues related to ERP systems and their implementation.
15. Use basic reporting and analytical tools to analyze multidimensional data.
16. Demonstrate essential decision making skills in an ERP simulation game.

ACADEMIC INTEGRITY:

Students at HKUST are expected to observe the Academic Honor Code at all times (https://acadreg.ust.hk/generalreg.html for more information). Zero tolerance is shown to those who are caught cheating on any form of assessment and a zero mark will be given. In particular, any act of cheating on exam will automatically result in an F grade for this course. All written assignment will be screened by Turnitin for plagiarism and points will be deducted when the similarity index is considered high (e.g., more than 25%).

<p align="center">**COURSE OUTLINE**</p>

Week 1 September 8	**Introduction** ■ Integrated business solutions ■ ERP markets and development
Week 2 September 15	**Technology Enablers** ■ Systems integration ■ Enterprise system architectures ■ Relational database **Contemporary Issues and Latest Development** ■ Open source ERP, SOA, and SaaS ■ Integration with SCM and CRM
Week 3 September 22 *Online quiz #1*	**Diagnosis of Business Process Problems** ■ Business process reengineering at ABC Inc.
Week 4 September 29 *Case analysis due before class*	**Managing Business Process Change** ■ Business process reengineering ■ Modeling and automating business processes **Case Discussion** ■ Cathay Pacific (B): Implementing an integrated e-freight solution
Week 5 October 6 *Online quiz #2*	**Introduction to SAP** ■ SAP basic navigations ■ GBI dataset for homework assignments **Learning SAP-FI** ■ Lab exercise: FI
Week 6 October 13 *Online quiz #3*	**Learning SAP-SD, MM, PP** ■ Lab exercises: SD, MM, PP
Week 7 October 20 *Online quiz #4*	**Integrated Business Process – 1** ■ Worksheet approach to MRP ■ Lab exercise: Master data
Week 8 October 27 *Online quiz #5*	**Integrated Business Process – 2** ■ Lab exercise: Make-to-stock scenario
Week 9 November 3 *Online quiz #6*	**ERPsim Distribution Game** ■ Practice game (20%) ■ Decision making of an integrated sales process

Week 10 November 10 *Online quiz #7* *Case analysis due before class*	**Enterprise Systems Implementation** ■ ERP implementation methodology ■ System selection and evaluation **Case Discussion** ■ Bloom & Grow Asia (A): ERP strategy and planning
Week 11 November 17 *Online quiz #8*	**Case Discussion** ■ Bloom & Grow Asia (B): ERP selection **Business Analytics** ■ Analytics framework and technology, in-memory analytics
Week 12 November 24 *Online quiz #9*	**ERP Reporting and Analytical Tools** ■ Extracting transactional data from SAP ■ Excel's pivot table exercises
Week 13 December 1 *Online quiz #10*	**ERPsim Distribution Game** ■ Final competition game (80%) ■ Use of analytical tools for decision making
Exam Week	**Final Exam**

WRITTEN ASSIGNMENTS

General information:

While here is no page limit for the case analysis, it should be one to two pages long, single spaced between lines but double spaced between paragraphs. *Please note that all written assignments will be checked by Turnitin for plagiarism. Penalty will be imposed for any submission with a high similarity score.* To avoid receiving a high similarity score, please do not copy and paste the case assignment questions or extensive use of exact wordings in the case.

For each case, a list of suggested questions is given (below) but you don't need to follow them exactly. You can organize your answer any way you think best. Make sure your analysis is concise (use of bullet points for the answers is allowed) and avoids repeating information that already given in the case. A submission link is provided in Canvas for you to upload the analysis. Late assignment will not be accepted unless it is accompanied by a valid (e.g., medical) excuse.

Assignment 1. Cathay Pacific (B): Implementing an integrated e-freight solution
Due before class

(a) How crucial was an integrated process and information sharing to Cathay Pacific's cargo operations?

(b) What were the major roles of Cathay Pacific in introducing the e-freight process? How to overcome the challenges when implementing it?

(c) Describe how Cathay Pacific's ultimate success in its air cargo business depended on an alignment of people, process, and technology.

Assignment 2. Bloom & Grow Asia (A): ERP strategy and planning
Due before class

(a) For Bloom & Grow Asia, what specific reasons were presented to justify the first ERP implementation project (NetSuite)? Did these reasons warrant an ERP implementation project?

(b) What prompted the consideration of a second ERP implementation (xTuple)? Should Bloom & Grow upgrade its existing xTuple system or replace it with a new one?

(c) What recommendations would you give Peter Deacon as he was pondering what to do next? What were the major lessons he should have learned in the previous two implementations?

Grading Criteria and Rubrics for Case Analysis

Name: _____

Evaluation summary (20 points each for each criterion for a total of 100 points per case)

Scoring rubrics	Well exceed expectation (19-20)	Exceed expectation (17-18)	Meet expectation (12-16)	Below expectation (0-11)	Score
Identification of the main issues and/or problems	Identify and understand completely all the main issues and problems	Identify and understand most of the main issues and problems	Identify and understand some of the main issues and problems	Identify and understand only few of the main issues and problems	
Analysis of the issues	Insightful and thorough analysis of all the issues	Thorough analysis of most of the issues	Superficial analysis of some of the issues	Incomplete analysis of the issues	
Comments on effective solutions or business practices	Well identified, reasoned and appropriate comments or proposal on solutions to all issues	Appropriate, well thought-out comments on solutions or proposal for solutions to most issues	Superficial and/or inappropriate solutions to some of the issues	Little or no action suggested, and/or inappropriate solutions to the issues	
Connection to theoretical frameworks or concepts	Effectively integrate other sources of knowledge and make insightful connections	Appropriate connections between most of the issues in the case and relevant theory	Appropriate connections between some of the issues in the case and relevant theory	Little or no connection between the issues in the case and relevant theory	
Use of language	Free of any grammatical or spelling error; good choice of words	A few grammatical or spelling errors; should have better choice of words	Some grammatical or spelling errors	Lots of grammatical or spelling errors	
Total: Use the following ranges to reflect the overall performance. 96-100 (exceptional report writing and extremely effective); 90-95 (very good report writing and very effective); 80-89 (good and effective); 70-79 (acceptable and somewhat effective); 69 or below (weak and not effective).					