



ISOM4740 Enterprise Resource Management

Fall 2026

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 2026

Wednesday and Friday, 4:30-5:50 pm, LSK-1001

Class attendance and participation are expected for the best learning experience.

INSTRUCTOR

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TEACHING ASSISTANT

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TEXTBOOK

The textbook, *Enterprise Systems for Digital Transformation*, will be distributed to you for your reference and further study. Other learning materials will be posted in Canvas.

GRADING POLICY

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

In-class quizzes (best 4 out of 5)	15
Class Participation	10
Case analyses (2)	15
Lab exercises (3)	30
Final exam	30
Total	100

Grade	Description
A	Excellent performance: Demonstrates a comprehensive grasp of subject matter, expertise in problem-solving, and significant creativity in thinking. Exhibits a high capacity for scholarship and collaboration, going beyond core requirements to achieve learning goals.
B	Good performance: Shows good knowledge and understanding of the main subject matter, competence in problem-solving, and the ability to analyze and evaluate issues. Displays high motivation to learn and the ability to work effectively with others.
C	Satisfactory performance: Possesses adequate knowledge of core subject matter, competence in dealing with familiar problems, and some capacity for analysis and critical thinking. Shows persistence and effort to achieve broadly defined learning goals.
D	Marginal pass: Has threshold knowledge of core subject matter, potential to achieve key professional skills, and the ability to make basic judgments. Benefits from the course and has the potential to develop in the discipline.
F	Fail: Demonstrates insufficient understanding of the subject matter and lacks the necessary problem-solving skills. Shows limited ability to think critically or analytically and exhibits minimal effort towards achieving learning goals. Does not meet the threshold requirements for professional practice or development in the discipline.

In-class quizzes

Each quiz needs to be completed in class on the date as indicated in the syllabus. There is no makeup quiz since we count only the best 4 out of the 5 scores.

Class Participation

Class participation will be assessed based on students' contributions to the discussion sections in Canvas for each lab exercise and topic. Students may earn participation

points by responding to classmates' questions or contributing useful ideas and clarifications. Participation points will be awarded according to the relevance, quality, and consistency of students' contributions throughout the term.

Case analysis assignments must be submitted before class on the scheduled case discussion date. Students are required to complete two case submissions, which together account for 15 points of the final grade. Detailed formatting requirements and discussion questions are provided in due course. Late submissions will not be accepted except in cases with a valid documented excuse, such as a medical emergency.

Lab Exercises:

Students should follow the detailed instructions provided for the three lab exercises.

- Lab exercise 1 introduces basic SAP applications in SD, MM, and PP.
- Lab exercise 2 requires students to apply knowledge from the earlier lab exercises in an integrated business process scenario using SAP.
- Lab exercise 3 focuses on the use of SAP reporting and analytical tools, as well as Business Builder, to support data analysis and decision-making

Students must submit their work for all lab exercises through Canvas by the deadlines specified in the syllabus. Late submissions will not be accepted except in cases with a valid documented excuse, such as a medical emergency.

Final exam will include short-answer questions, quantitative problems, and critical thinking questions. The use of SAP will not be required during the exam. A study guide will be provided by the last day of class to support students' preparation.

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 analytic tools and Excel. (PILO-3, 7)

** Course goals are stated with matching PILO of the BBA-OM program.*

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.

**COURSE AI
POLICY:**

You are prohibited from using generative AI (such as ChatGPT) to produce materials or content related to all assessment tasks such as case analysis and exam.

**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 assignments will be screened by Turnitin for plagiarism and points will be deducted when the similarity index is considered high (e.g., more than 25%).

COURSE OUTLINE		
(This is a tentative schedule and is subject to change)		
	Conceptual / Managerial Topics	ERP Applications
Week 1 September 2, 4	Introduction to ERP and SAP ❖ Review of SCM ➢ Relationships between SCM and ERP ❖ Intro to ERP ➢ History of ERP ➢ Integrated business solutions ➢ ERP markets and development ❖ Intro to SAP	
Week 2 September 9, 11	ERP System Architecture (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 16*, 18 <i>*quiz #1</i>	Managing Business Process Change ❖ Business process reengineering ❖ Modeling and automating business processes Case Discussion Diagnosis of Business Process Problems ❖ Business process reengineering at ABC Inc. <i>Case analysis due before class (Sep 18)</i>	SAP Tool ❖ SAP basic navigations

Week 4 September 23, 25	Organization Structure ❖ FI, CO organization Structure ❖ Production and Inventory Management organization structure ❖ Purchasing organization Structure ❖ SD organization Structure	SAP Tool ❖ GBI dataset for SAP lab exercises
Week 5 September 30*, October 2 <i>*quiz #2</i>	Customer Relationship Management ❖ Types of CRM systems ❖ Applications in marketing, sales, services	Learning SAP-FI ❖ For practice: FI
Week 6 October 7, 9	Supply Chain Management ❖ SAP APO and IBP ❖ Applications in DP, SNP, PP/DS, ATP, TP/VS	Learning SAP-SD ❖ Lab exercise 1A: SD
Week 7 October 14, 16	Digital Transformation ❖ Industry Examples	Learning SAP-MM, PP ❖ Lab exercise 1B: MM ❖ Lab exercise 1C: PP
Week 8 October 21*, 23 <i>*quiz #3</i>	Integrated Business Process ❖ Worksheet approach to MRP <i>Lab exercises 1A to 1C due by Monday</i>	Integrated Business Process ❖ Lab exercise 2A: Master data
Week 9 October 28, 30	Enterprise Systems Implementation ❖ ERP implementation methodology ❖ System selection and evaluation	Integrated Business Process Lab exercise 2B: Make-to-stock scenario
Week 10 November 4, 6	Case Discussion ❖ Bloom & Grow Asia (I): ERP strategy and planning <i>Case analysis due before class</i>	Integrated Business Process ❖ Lab exercise 2C: Review
Week 11 November 11*, 13 <i>*quiz #4</i>	Case Discussion ❖ Bloom & Grow Asia (II): ERP selection <i>Lab exercises 2A to 2C due by Monday</i>	SAP Reporting and Analytical Tools ❖ Lab exercise 3A: Reports and analyses in SAP ERP
Week 12 November 18, 20	Business Analytics and Dashboard ❖ ERP Data Analytics ❖ Excel's Pivot Table and Simple Dashboard	Excel's Pivot Table ❖ Lab exercise 3B: Excel's pivot table
Week 13 November 25*, 27 <i>*quiz #5</i>	Business Builder ❖ Extracting transactional data from SAP ERP Final Review	SAP Reporting and Analytical Tools ❖ Lab exercise 3C: Business Builder <i>Lab exercises 3A to 3C due by Friday</i>

WRITTEN ASSIGNMENTS

General information:

Each case analysis is an **individual written assignment**. Unless otherwise specified, the expected length is about two pages, single-spaced within paragraphs and double-spaced between paragraphs. *Please note that all written assignments will be checked by Turnitin for plagiarism. Penalties will be imposed for submissions with a high similarity score.* To reduce similarity, do not copy and paste the assignment questions or rely heavily on exact wording from the case materials.

Suggested questions are provided below to guide your analysis, but you do not need to answer them in the exact order. Organize your response in the way that best supports your argument. Your submission should be concise, analytical, and supported by evidence from the case and relevant course concepts. Bullet points may be used where appropriate, but avoid simply repeating information already stated in the case. Submit your work through Canvas by the deadline. Late submissions will not be accepted unless accompanied by a valid documented excuse, such as a medical certificate.

Assignment 1. ABC Inc.: Diagnosing Business Process Problems

Role-play and current-state process diagram in class; individual case analysis and revised process diagram due before the next class discussion

ABC Inc. is a role-play case exercise designed to help students diagnose cross-functional business process problems. The role-play will be conducted in class first. During the in-class activity, students will work together to develop a current-state process diagram that captures the existing process flow, handoffs, information gaps, and operational issues.

The case discussion will take place in the next class. Before that discussion class, each student must submit an individual case analysis through Canvas, together with the process diagram prepared from the in-class role-play. The written submission should reflect the student's own analysis and recommendations, even though the role-play activity and later discussion take place in class.

In the individual case analysis, identify the main process issues faced by ABC Inc., explain the root causes from a cross-functional perspective, and propose practical improvements. Your submission should include both the initial current-state process diagram and a revised future-state process diagram showing how your recommendations would improve the process. Your analysis should draw on observations from the role-play and connect them with relevant course concepts, such as process integration, information sharing, coordination, and enterprise systems support.

Assignment 2. Bloom & Grow Asia (I): 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 Asia 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

Evaluation summary (max 20 points for each criterion for a total of 100 points). *For reference only, as not all case questions will require all evaluation criteria below.*

Scoring rubrics	Well exceed expectation (19 – 20)	Exceed expectation (17 – 18)	Meet expectation (15 – 16)	Below expectation (0 – 14)
Identification of the main issues and/or problems	Identify and understand completely 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 documented, identified, reasoned and appropriate comments/proposal on solutions to all issues	Appropriate, well thought out comments on solutions/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
Make use of other relevant course learning materials	Apply extensively concepts learned in class or from other relevant learning materials	Apply some concepts learned in class or from other relevant learning materials	Apply a very limited amount of concepts learned in class or from other relevant learning materials	No application at all of any concepts learned in class or from other relevant learning materials
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	Many grammatical or spelling errors
Total: Use the following ranges to reflect the overall performance. 95-100 (exceptional report writing and extremely effective); 90-94 (very good report writing and very effective); 80-89 (good and effective); 70-79 (acceptable and somewhat effective); below 70 (weak and not effective).				