ISOM4780 Integrated Planning and Execution
Fall 2025

Department of Information Systems, Business Statistics & Operations Management

COURSE

This course will use an integrated simulation game as a major learning tool to illustrate how strategic and operational decisions should be made in a competitive business environment. Students will learn to integrate and align key decisions in different business functions to simultaneously achieve a set of defined performance objectives of a company by evaluating decision alternatives and tradeoffs as well as optimizing the resource utilization.

Wednesday and Friday, 4:30-5:50 pm, LSK-1003

INSTRUCTOR

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TEACHING ASSISTANT

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TEXTBOOK

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

GRADING POLICY

This course will be assessed using criterion-referencing and grades will not be assigned using a curve. Final course grade will be determined by the following criteria and point distribution.

On-time attendance and participation#	10
Competition games (group)*	30
Presentation (group)*	10
Final exam	50
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.

This course involves experiential learning and extensive group work. Your on-time attendance and participation in class are explicitly expected. You will receive 5 (out of 10) points in the beginning for full attendance of class from week 3 onward. If you are late to class (more than 15 minutes), 0.5 point will be deducted. If you are absent from class without a valid reason, 1 point will be deducted. On the other hand, you will earn a maximum of 1 point per class session, from week 3 onward for active participation in class.

* All group work may require a peer evaluation on request. Anyone receiving a poor peer evaluation will receive a deduction up to 100% off from the scores originally assigned to the group work (competition games and presentation). Each

group will have a chance to make a presentation for about 20 minutes, followed by Q&As, on their game review/analysis or a company in the spotlight, as assigned by the instructor.

LEARNING OBJECTIVES

By the end of the course, students should be able to:

1. Relate the business strategy and execution for a company in a competitive market
2. Monitor and evaluate the business results with proper performance measurement models and metrics, such as AHP, DEA, and SCOR etc.
3. Identify the strategic decisions to achieve higher returns and market dominance
4. Explain a broad spectrum of business concepts and business functions
5. Demonstrate how to run a business profitably through a simulation game
6. Explore and identify the cause-and-effect relationship between the drivers and business performance.

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 (see http://www.ust.hk/vpaao/integrity/ 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.

COURSE OUTLINE

Week 1 September 3, 5	**Competitive strategy** ■ Resource-based and market-based view of competitive advantage ■ Integration of business strategy and functional strategies ■ Concepts of integrated planning and execution **Value-based business strategy** ■ Defining a unique value proposition and market positioning ■ Case discussion: LeadNitro
Week 2 September 10, 12	**Pricing strategy** ■ Determining the optimal price point and the acceptable price range ■ Reading: How to price your product: A guide to the Van Westendorp pricing model ■ Quick case: Happy Cow Ice Cream ■ Group exercise: Revenue management game
Week 3 September 17, 19	**Benchmarking supply chain performance** ■ Organizational performance measures and balanced scorecard ■ Drivers for supply chain key performance indicators (KPIs) ■ Determining the relative importance of KPIs using analytic hierarchy process (AHP) ■ Reading: Why the most successful companies are scalable? **Learning MBS – Model 1 game** ■ Basic modules and analytics ■ Practice game

Week 4 September 24, 26	**Learning MBS – Model 2 game** ■ Selection of performance criteria for Model 2 game using AHP ■ Planning and execution on core functions of sales, purchasing, and production ■ Practice game **Data envelopment analysis (DEA)** ■ Basic concepts of DEA ■ Benchmarking performance using DEA
Week 5 October 3	**MBS – Model 3 game** ■ Return on investment of R&D and marketing ■ Managing multiple retail markets ■ Group breakout session for competition game: Round 1 ■ Submit decisions for competition game: Round 2
Week 6 October 8, 10	**Case discussion** ■ Saint Honore Bakery: Benchmarking store-level performance **MBS – Model 3 game** ■ Group presentation ■ Group breakout session for competition game: Round 3 and 4 ■ Submit decisions for competition game: Round 5
Week 7 October 15, 17	**MBS – Model 3 game** ■ Additional information on financial leverage ■ Group presentation ■ Group breakout session for competition game: Round 6 and 7 ■ Submit decisions for competition game: Round 8 to end
Week 8 October 22, 24	**MBS – Model 4 game (M4A)** ■ Group presentation ■ Group breakout session for competition game M4A: Round 1 and 2 ■ Submit decisions for competition game M4A: Round 3
Week 9 October 31	**MBS – Model 4 game (M4A)** ■ Group breakout session for competition game M4A: Round 4 and 5 ■ Submit decisions for competition game M4A: Round 6
Week 10 November 5, 7	**MBS – Model 4 game (M4A)** ■ Group presentation ■ Group breakout session for competition game M4A: Round 7 to end
Week 11 November 12, 14	**MBS – Model 4 game (M4B)** ■ Group presentation ■ Group breakout session for competition game M4B: Round 1 and 2 ■ Submit decisions for competition game M4B: Round 3

Week 12 November 19, 21	**MBS – Model 4 game (M4B)** ■ Group presentation ■ Group breakout session for competition game M4B: Round 4 and 5 ■ Submit decisions for competition game M4B: Round 6
Week 13 November 26, 28	**MBS – Model 4 game (M4B)** ■ Group breakout session for competition game M4B: Round 7 to end **Course review** ■ Reflections on the overall business planning and execution strategy
Exam week (December 8 to 19, to be announced)	**Final exam**

Suggested Questions for Case Discussion

Case 1: LeadNitro

- How could Matthew leverage his work experience and technical resources to turn a service concept into a real startup business?
- Will the prospective venture capital investor consider Matthew's offer a reasonable one (USD 1 million for 10% stake of the company)?
- What are the opportunities and challenges for LeadNitro to expand its business in the Greater Bay Area?

Case 2: Happy Cow Ice Cream

- What is the main problem of asking potential customers on their preferred price for the ice cream products?
- How to determine the optimal price and its range with the Van Wesrtendrop pricing model?
- What would you recommend the company to do with the existing vs. optimal price for their ice cream products?

Case 3: Saint Honore Cake Shop

- On what basis should we benchmark the performance of different stores of Saint Honore Cake Shop?
- What variables in the Saint Honore's dataset should be classified as controlled vs. uncontrolled in performing the data envelopment analysis, and why?
- What other performance measures other than efficiency should be considered for benchmarking the overall store performance?