ISOM4780 Integrated Planning and Execution
Spring 2026

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.

Tuesday and Thursday, 10:30-11:50 am, LSK-1005

INSTRUCTOR

Prof. Ronald Lau (rlau@ust.hk)
Office: LSK-4081; Phone: 2358-8348

TEACHING ASSISTANT

Sherry Wu (imwuc@ust.hk)
Office: LSK-4065; Phone: 2358-8746

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

On-time attendance and participation [#]	10
Competition games (group)*	25
Presentation (group and individual) *	15
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 week, from week 3 onward for active participation in class.

* All group work may require an optional peer evaluation on request (Appendix 1). 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, of their choice and confirmed by the instructor. See Appendix 2 for the assessment of presentation: 10 points will be allotted to group and 5 points to individual performance.

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 drivers for 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 allowed to use generative AI (such as ChatGPT) to research for additional materials relevant to your group presentation. However, you still need to create your own contents for assessment purpose.
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 February 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 February 10, 12	**Pricing strategy** ■ Value-based strategy vs. Price-based strategy (typically cost-based or competitive pricing) ■ 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	Lunar New Year Holiday (No Class)
Week 4 February 24, 26	**Benchmarking business 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 5 March 3, 5	**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 for benchmarking performance ■ Case discussion: Saint Honore Cake Shop
Week 6 March 10, 12	**Learning MBS – Model 3 game** ■ Return on investment of R&D and marketing ■ Managing multiple retail markets ■ Practice game
Week 7 March 17, 19	**Introducing the competition games** ■ Additional information on financial leverage ■ Case discussion: The Alpha Company (maximum 5 points based on ranking)
Week 8 March 24, 26	**MBS – Model 4 game (M4A)** ■ Group presentation ■ Submit decisions before class for competition game M4A ■ Group breakout session in class for competition game M4A
Week 9 March 31, April 2, 9	**MBS – Model 4 game (M4A)** ■ Group presentation ■ Submit decisions before class for competition game M4A ■ Group breakout session in class for competition game M4A
Week 10 April 14, 16	**MBS – Model 4 game (M4A)** ■ Group presentation ■ Submit decisions before class for competition game M4A ■ Group breakout session in class for competition game M4A: Round 8 to end (maximum 10 points based on ranking)
Week 11 April 21, 23	**MBS – Model 4 game (M4B)** ■ Group presentation ■ Submit decisions before class for competition game M4B ■ Group breakout session in class for competition game M4B
Week 12 April 28, 30	**MBS – Model 4 game (M4B)** ■ Group presentation ■ Submit decisions before class for competition game M4B ■ Group breakout session in class for competition game M4B
Week 13 May 5, 7	**MBS – Model 4 game (M4B)** ■ Group presentation ■ Submit decisions before class for competition game M4B ■ Group breakout session in class for competition game M4B: Round 8 to end (maximum 10 points based on ranking) **Course review** ■ Reflections on the overall business planning and execution strategy

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?

APPENDIX 1
PEER EVALUATION

Evaluated by: _____

Evaluation criteria (max 20 points each criterion for a total of 100 points)

Criteria	Significantly below expectation (0-13 points)	Below expectation (14-15 points)	Meet expectation (16-17 points)	Exceed expectation (18-19 points)	Significantly exceed expectation (20 points)
Participation	Miss several team meetings without prior notice; do not participate effectively in team discussion of project issues	Miss one meeting without prior notice; or missed several team meetings with prior notice; participated in team discussions when asked	Miss no more than one team meeting with prior notice and proactively contribute to the team dialogue in most meetings	Attend all team meetings and often is a significant contributor to the team discussions	… plus are proactive in helping the team solve problems outside of meetings / assigned tasks, e.g., lead informal meetings to resolve team issues
Reliability	Work is usually incomplete and/ or late	Deliver most assigned work products on time and address assigned scope adequately in most cases	Deliver all assigned work products on time and consistently address assigned scope fully and appropriately	Consistently complete assignments early and/or often address additional scope beyond assigned	… and, in so doing, add value beyond assignment
Initiative and Sense of Responsibility	Wait until due date to bring up issues with assignment; are often not prepared for meetings	Reach out to other team members at last minute so there is not enough time to fix before due date; sometimes are not prepared for meetings	Verify scope of assigned work; when having difficulty with assigned work, is proactive to reach out to other team members with sufficient time to receive help; usually are prepared	Sought feedback on progress periodically throughout assignment to ensure that he/she was on target and is always prepared	Consistently take initiative to resolve issues through consultation with others, keeping everyone in the loop
Work quality	Work frequently contains mistakes, or is poorly communicated or without supporting backup evidence	Assign work is largely error free, but not always well communicated or with weak supporting rationale and backup	Assigned work is largely error free, clearly communicated verbally and graphically with adequate supporting backup materials	Work consistently error-free, well communicated verbally and graphically, with strong backup materials	. . . plus evidence of significant ingenuity or creativity or insight for the benefit of the team
Overall contribution to project success	Have almost no contribution	Have little contribution	Have some contribution	Have more contribution	Have significant contribution

Please evaluate each team members including *yourself* according to the five criteria as shown above. Your evaluation on your own performance is for reference only. Please refer to the rubrics for description. While using the individual rubrics are optional, you must enter the **total score** in the space below using the following ranges to reflect the overall performance: 96-100 (exceptional team player or leader); 90-95 (very good team player); 80-89 (good team player); 70- 79 (acceptable team player); 69 or below (weak and not effective team player).

Name of Student	Participation	Reliability	Initiative	Work Quality	Contribution	Total Score

APPENDIX 2
ASSESSMENT RUBRICS FOR PRESENTATION

Evaluation criteria (max 20 points each criterion for a total of 100 points)

Subject matter: Interesting, relevant topic; well researched materials; clear purpose with a thoughtful conclusion	
Contents: Main points are well organized/developed; informative and accurate content; have a clear focus; clear introduction and conclusions; insightful/practical implications	
Visual effects: Visual aids / slides are creative; clear and easy to read and understand; enhance the effectiveness of the presentation; free of obvious misspellings or typos	
Presentation skills: Professional; comfortable and confident; good verbal and non-verbal communication; flow and pace is consistently appropriate; good command of language; appropriate voice volume and tone	
Audience control: Maintain good eye contact; enthusiastic; use the unexpected to full advantage; hold the audience's attention throughout; finish within the allotted time	
Total: Use the following ranges to reflect the overall performance. 96-100 (exceptional presentation and extremely effective); 90-95 (very good presentation and very effective); 80-89 (good and effective); 70-79 (acceptable and somewhat effective); 69 or below (weak and not effective).	

Assessment rubric

	Exemplary	Above expectation	Meet expectation	Below expectation	Not acceptable
Points	19-20	17-18	15-16	13-14	0-12

Adjustment for individual student's presentation performance

Slides	Student Name	Performance / Comments