



## ISOM4780 Integrated Planning and Execution Spring 2024

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.

#### Spring 2024

Time: Tuesday/Thursday, 3:00-4:20 pm, Room 4582 (Lift 27-28)

### INSTRUCTOR

Prof. Ronald Lau (rlau@ust.hk)

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Phone: 2358-8348

Office hours: Tuesday/Thursday, 1:30-2:30pm and 4:30-5:30pm

### TEACHING ASSISTANT

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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.

Participation and peer evaluation	10
Competition games (group)	30
Presentation (group) *	10
Final exam	<u>50</u>
Total	100

\* Each group will have a chance to make a presentation on their game review/analysis (for about 15 minutes) 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.

### ACADEMIC INTEGRITY

Students at HKUST are expected to observe the Academic Honor Code at all times (see <http://www.ust.hk/vpao/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**

<p><b>Week 1</b> February 1</p>	<p><b>Competitive strategy</b></p> <ul style="list-style-type: none"> <li>■ Integration of business strategy and functional strategies</li> <li>■ Concepts of integrated planning and execution</li> <li>■ Organizational performance measures and balanced scorecard</li> </ul>
<p><b>Week 2</b> February 6, 8</p>	<p><b>Benchmarking supply chain performance</b></p> <ul style="list-style-type: none"> <li>■ Drivers for supply chain key performance indicators (KPI)</li> <li>■ Reading: Supply chain performance dashboards</li> </ul> <p><b>Analytic hierarchy process (AHP)</b></p> <ul style="list-style-type: none"> <li>■ Basic concepts of AHP</li> <li>■ Selection of performance criteria using AHP</li> </ul>
<p><b>Week 3</b> February 15</p>	<p><b>Learning MBS – Model 1 game</b></p> <ul style="list-style-type: none"> <li>■ Basic modules and analytics</li> <li>■ Practice game</li> </ul>
<p><b>Week 4</b> February 20, 22</p>	<p><b>Analytic hierarchy process (AHP)</b></p> <ul style="list-style-type: none"> <li>■ Exercise using MBS performance criteria</li> </ul> <p><b>Learning MBS – Model 2 game</b></p> <ul style="list-style-type: none"> <li>■ Selection of performance criteria for Model 2 game using AHP</li> <li>■ Planning and execution on core functions of sales, purchasing, and production</li> <li>■ Practice game</li> </ul>
<p><b>Week 5</b> February 27, 29</p>	<p><b>Data envelopment analysis (DEA)</b></p> <ul style="list-style-type: none"> <li>■ Basic concepts of DEA</li> <li>■ Benchmarking performance using DEA</li> </ul> <p><b>MBS – Model 3 game</b></p> <ul style="list-style-type: none"> <li>■ Return on investment of R&amp;D and marketing</li> <li>■ Managing multiple retail markets</li> <li>■ Group breakout session for competition game: Round 1</li> <li>■ Discussion and analysis of results</li> <li>■ Submit decisions for competition game: Round 2</li> </ul>
<p><b>Week 6</b> March 5, 7</p>	<p><b>Case discussion</b></p> <ul style="list-style-type: none"> <li>■ Saint Honore Bakery: Benchmarking store-level performance</li> </ul> <p><b>MBS – Model 3 game</b></p> <ul style="list-style-type: none"> <li>■ Group presentation</li> <li>■ Group breakout session for competition game: Round 3 and 4</li> <li>■ Discussion and analysis of results</li> <li>■ Submit decisions for competition game: Round 5</li> </ul>

<p><b>Week 7</b> March 12, 14</p>	<p><b>Case discussion</b></p> <ul style="list-style-type: none"> <li>■ Chinese Pharmaceuticals (HK) Limited: Effective forecasting for optimal inventory management</li> </ul> <p><b>MBS – Model 3 game</b></p> <ul style="list-style-type: none"> <li>■ Group presentation</li> <li>■ Group breakout session for competition game: Round 6 and 7</li> <li>■ Discussion and analysis of results</li> <li>■ Submit decisions for competition game: Round 8</li> </ul>
<p><b>Week 8</b> March 19, 21</p>	<p><b>MBS – Model 4 game (M4A)</b></p> <ul style="list-style-type: none"> <li>■ Group presentation</li> <li>■ Additional information on financial leverage</li> <li>■ Group breakout session for competition game M4A: Round 1 and 2</li> <li>■ Discussion and analysis of results</li> <li>■ Submit decisions for competition game M4A: Round 3</li> </ul>
<p><b>Week 9</b> March 26</p>	<p><b>MBS – Model 4 game (M4A)</b></p> <ul style="list-style-type: none"> <li>■ Group breakout session for competition game M4A: Round 4 and 5</li> <li>■ Discussion and analysis of results</li> <li>■ Submit decisions for competition game M4A: Round 6</li> </ul>
<p><b>Week 10</b> April 9, 11</p>	<p><b>MBS – Model 4 game (M4A and M4B)</b></p> <ul style="list-style-type: none"> <li>■ Group presentation</li> <li>■ Group breakout session for competition game M4A: Round 7 and 8</li> <li>■ Discussion and analysis of results</li> <li>■ Submit decisions for competition game M4B: Round 1</li> </ul>
<p><b>Week 11</b> April 16, 18</p>	<p><b>MBS – Model 4 game (M4B)</b></p> <ul style="list-style-type: none"> <li>■ Group presentation</li> <li>■ Group breakout session for competition game M4B: Round 2 and 3</li> <li>■ Discussion and analysis of results</li> <li>■ Submit decisions for competition game M4B: Round 4</li> </ul>
<p><b>Week 12</b> April 23, 25</p>	<p><b>MBS – Model 4 game (M4B)</b></p> <ul style="list-style-type: none"> <li>■ Group presentation</li> <li>■ Group breakout session for competition game M4B: Round 5 and 6</li> <li>■ Discussion and analysis of results</li> <li>■ Submit decisions for competition game M4B: Round 7</li> </ul>
<p><b>Week 13</b> April 30, May 2</p>	<p><b>MBS – Model 4 game (M4B)</b></p> <ul style="list-style-type: none"> <li>■ Group breakout session for competition game M4B: Round 8</li> <li>■ Discussion and analysis of results</li> </ul>
<p><b>Week 14</b> May 7, 9</p>	<p><b>Reflections on the overall business planning strategy</b></p> <p><b>Course review</b></p>