



# ISOM4810 OM Best Practices

## Spring 2026

Department of Information Systems, Business Statistics and  
Operations Management

### COURSE

ISOM4810 OM Best Practices (3 credits)

Operations Management (OM) deals with the production and delivery of goods and services. Throughout this course, we will learn many important, practical, and relevant applications in OM through case studies. We shall together try to understand what the problem is, how it is addressed, and how it should work out. While investigating the root causes of the problem, we will explore existing industry best practices (if any) or identify possible solutions, in an attempt to learn what qualifies it a success and how portable (or transferable) this practice can be, with an emphasis on the alignment of people, process and technology. Students will expose to a wide range of business case studies describing contemporary approaches and technologies, such as artificial intelligence etc., that enhance their understanding and problem-solving skills in OM. In addition, students will gain experience to identify different business/operational issues and explore alternative solutions to address them by developing a case study with direct or published sources and information.

*This is an advanced OM elective course and not a typical lecture-based course. Students will benefit most if they like to take initiative to learn in a group setting and are interested in sharpening their research and communication (presentation and writing) skills.*

### Spring 2026

Tuesday and Thursday: 1:30–2:50 pm, Room 5583 (Lift 30-31)

### INSTRUCTOR

Prof. Ronald Lau (rlau@ust.hk)

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### TEACHING ASSISTANT

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### TEXTBOOK

All learning materials, including case studies, readings, and online references, will be available in Canvas.

### GRADING POLICY

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

On-time attendance and participation	10
Quizzes (best 4 of 5)	20
Case analysis with questions included	20
Group project: presentation	20
Group project: report and analysis	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.

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 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 and 3 for the assessment of the project report and presentation, respectively.

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. If you miss more than one quiz for a valid reason such as medical emergency, your total quiz score will be proportionated and averaged based on those quizzes taken.

**COURSE GOALS**

This advanced OM course is designed in such a way to provide you an opportunity to:

1. Analyze some of the most relevant, interesting, and practical OM problems in different industries.
2. Contrast and critique solutions that have been used in practices.
3. Identify and analyze similar problems in practice.
4. Develop an actionable solution and defend its implementation.

**SPECIFIC KNOWLEDGE AND SKILLS DEVELOPED**

By completing this course, you should be able to:

1. Work effectively in a group and lead a group (a rotating role).
2. Work with other functions in making business and operations decisions.
3. Communicate effectively in presentations and written analyses.
4. Develop the necessary skills to write a business case study for future teaching and learning purposes.

**LEARNING APPROACH**

This course is not a typical, lecture-based course. We rely mostly on publicly available source of documented cases of company success stories that could be considered industry best practices. We recommend you, working as a group, to research and identify these best practices from sources such as INFORMS Journal of Applied Analytics (formerly Interfaces) and The CASE Journal etc. To ensure these best practices are still relevant, you should select those case studies published within the past five years or consult your instructor if otherwise.

**CASE ANALYSES**

You will work in a group (size to be determined), which will be assigned to work on one case or articles and required to submit the analysis (in the format of presentation slides) at least one day (by midnight) before it is discussed in class. Along with your presentation slides, you also need to submit at least five (short answer, true/false, or multiple-choice) questions that can be used as quiz questions later in class. Only one submission is needed per group. Cases will be assigned by week 3 after the drop/add period is over.

You are expected to actively participate and contribute to (and possibly asked to lead) the class discussion for your assigned cases. Failure to do so will adversely affect your case analysis score. When your group is not presenting the assigned case, you are expected to raise questions to earn your own participation points.

When analyzing a case, you should use the list of questions below as a guide. Note that not all questions are relevant to your assigned cases though.

1. What is the 'big picture,' the general circumstances in which this problem has arisen?
2. Briefly describe the specific problem faced in this case.
3. What technical methodology is used to help the analysis?
4. What are the implications from the data (if provided)?
5. How are the results assessed? What has constituted a successful outcome? Is the outcome of this case successful?

6. What are the critical success factors in solving this business problem?
7. How portable/applicable do you think the results are to other situations?

You can organize your analysis any way you think best. Make sure your analysis is concise and avoid repeating too much information already given in the case. A submission link is provided in Canvas for you to upload the analysis (only one submission is needed per group). Late submission will carry a 20% reduction penalty.

## **GROUP PROJECT**

By the mid-term break, your group will decide on a topic to complete a business case study. The purpose of this group project is to allow you to put in practice what you learn throughout this course. To start with, your group needs to identify a company with an important, practical, and relevant problem. The company could be a local business, such as a restaurant, bank, supermarket, etc., a new start-up, or a globally known business.

A one-page project idea proposal, with standard format and margin (like this document), is due by week 7. You are encouraged to discuss your project idea with the instructor once your group is formed and has chosen a topic.

This course uses extensively business cases for learning. You will learn more about case learning and case writing techniques during the second half of this course. We will help develop your skills in these areas so that you will appreciate more about using business cases for your lifelong learning and, at the same time, communicate more effectively and confidently in your future career.

*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.*

## **COURSE AI POLICY:**

You are allowed to use generative AI (such as ChatGPT) to research for additional materials relevant to your case analysis and group project but they must be properly acknowledged. You are expected to use the AI generated contents for reference only and complete your work by your own effort.

## **ACADEMIC INTEGRITY**

Students at HKUST are expected to observe the Academic Honor Code at all times (see <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. 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

	Topics
<b>Week 1</b> February 3, 5	Introduction <ul style="list-style-type: none"> <li>• Why learning OM Best Practices?</li> <li>• How to get the most from this course?</li> <li>• Benchmarking vs. best practices</li> </ul> Readings <ul style="list-style-type: none"> <li>• Michael Hammer (2004), "How operational innovation can transform your company?" Harvard Business Review.</li> <li>• Danica De Vera (2023), "Operational performance explained: Definition, importance, example, and challenges," Accountingprofessor.org</li> <li>• Michael Schrage et al (2023), "AI is helping companies redefine, not just improve, performance," MIT Sloan Management Review.</li> </ul>
<b>Week 2</b> February 10, 12	How business innovation impacts our daily life? <ul style="list-style-type: none"> <li>• Ways that business drives innovation and improves lives</li> <li>• Examples: health care, air travel, and the Internet</li> <li>• Class discussion: How to redesign the boarding process for airlines?</li> </ul> Readings <ul style="list-style-type: none"> <li>• Ben Cohen (2023), "The astrophysicist who has a better way to board airplanes," Wall Street Journal.</li> </ul> When (and how) the industry best practices no longer make sense? <ul style="list-style-type: none"> <li>• The success story of TSMC</li> </ul> Readings <ul style="list-style-type: none"> <li>• Mihalis G. Markakis (2025), "TSMC: lessons in strategy and operational excellence from the world's chipmaker," IESE Business School.</li> </ul>
<b>Week 3</b>	Lunar New Year Holiday (No Class)
<b>Week 4</b> February 24, 26	Learning with business case studies <ul style="list-style-type: none"> <li>• From problem diagnosis to improvement</li> <li>• Adopting the right problem-solving approach</li> <li>• Demo case: Ronald Kleer and Singfat Chu (2014), "GlaxoSmithKline: Rebalancing excessive workloads," Ivey Publishing.</li> </ul> Developing a business case study <ul style="list-style-type: none"> <li>• Guidelines for the group project</li> <li>• How to write an interesting business case and use it effectively?</li> <li>• Ronald Lau, "Germagic: Six sigma quality in the making," Harvard Business Publishing.</li> </ul>
<b>Week 5</b> March 3*, 5  <i>* Quiz #1</i>	Case discussion <ul style="list-style-type: none"> <li>• Jasmina Bogojeska et al., (2021), "IBM predictive analytics reduces server downtime," INFORMS Journal on Applied Analytics.</li> <li>• Yuming Deng et al., (2023), "Alibaba realizes millions in cost savings through integrated demand forecasting, inventory management, price optimization, and product recommendations," INFORMS Journal on Applied Analytics.</li> </ul>

<p><b>Week 6</b> March 10*, 12</p> <p>* Quiz #2</p>	<p>Case discussion</p> <ul style="list-style-type: none"> <li>• Julien Guillen et al., (2019), "Europcar integrates forecasting, simulation, and optimization techniques in a capacity and revenue management system," INFORMS Journal on Applied Analytics.</li> <li>• John Heiney et al., (2021), "Intel realizes \$25 billion by applying advanced analytics from product architecture design through supply chain planning," INFORMS Journal on Applied Analytics.</li> </ul>
<p><b>Week 7</b> March 17*, 19</p> <p>* Quiz #3</p>	<p>Case discussion</p> <ul style="list-style-type: none"> <li>• Biao Yuan et al. (2023), "Cainiao optimizes the fulfillment routes of parcels," INFORMS Journal on Applied Analytics.</li> <li>• Sadan Kulturel-Konak et al. (2022), "Menu engineering for continuing care senior living facilities with captive dining patrons," INFORMS Journal on Applied Analytics.</li> </ul>
<p><b>Week 8</b> March 24*, 26</p> <p>* Quiz #4</p>	<p>Case discussion</p> <ul style="list-style-type: none"> <li>• Jiayi Liu et al. (2023), "AI vs. human buyers: A study of Alibaba's inventory replenishment system," INFORMS Journal on Applied Analytics.</li> <li>• Xiaojia Guo et al. (2020), "London Heathrow Airport uses real-time analytics for improving operations," INFORMS Journal on Applied Analytics.</li> </ul>
<p><b>Week 9</b> March 31*, April 2, 9</p> <p>* Quiz #5</p>	<p>Case study</p> <ul style="list-style-type: none"> <li>• Confirm the case study presentation schedule</li> </ul> <p>Group meeting</p> <ul style="list-style-type: none"> <li>• Finalize the outline of the case study</li> <li>• Start group work on case study</li> </ul>
<p><b>Week 10</b> April 14, 16</p>	<p>Meeting with the instructor for consultation</p> <ul style="list-style-type: none"> <li>• Make revision on the case study</li> <li>• Work on the case study presentation</li> </ul>
<p><b>Week 11</b> April 21, 23</p> <p><i>Presentation slides due April 27</i></p>	<p>Group meeting</p> <ul style="list-style-type: none"> <li>• Finalize the case study presentation and submit by due date</li> <li>• Finish the draft (sufficiently polished) of the case study</li> </ul>
<p><b>Week 12</b> April 28, 30</p>	<p>Group project presentation</p>
<p><b>Week 13</b> May 5, 7</p> <p><i>Written case report due May 15</i></p>	<p>Group project presentation</p> <p>Group meeting</p> <ul style="list-style-type: none"> <li>• Finalize the case study report using the feedback from the presentation</li> </ul>

# 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)
<b>Participation</b>	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
<b>Reliability</b>	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
<b>Initiative and Sense of Responsibility</b>	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
<b>Work quality</b>	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
<b>Overall contribution to project success</b>	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 WRITTEN ASSIGNMENT

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

Scoring rubrics	Well exceed expectation (19-20)	Exceed expectation (17-18)	Meet expectation (12-16)	Below expectation (0-11)	Score
<b>Identification of the main issues and/or problems</b>	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	
<b>Quality of questions and research</b>	Ask extremely clear, concise, and relevant questions and perform extensive research on the main issues	Ask very clear, concise, and relevant questions and perform good research on the main issues	Ask clear, concise, and relevant questions and perform just adequate research on the main issues	Fail to ask clear, concise, relevant questions and perform inadequate research on the main issues	
<b>Analysis of the issues</b>	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	
<b>Comments on effective solutions or business practices</b>	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	
<b>Use of language</b>	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	
<b>Total:</b> 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).					

## APPENDIX 3

### ASSESSMENT RUBRICS FOR PRESENTATION

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

<b>Subject matter:</b> Interesting, relevant topic; well researched materials; clear purpose with a thoughtful conclusion	
<b>Contents:</b> Main points are well organized/developed; informative and accurate content; have a clear focus; clear introduction and conclusions; insightful/practical implications	
<b>Visual effects:</b> Visual aids / slides are creative; clear and easy to read and understand; enhance the effectiveness of the presentation; free of obvious misspellings or typos	
<b>Presentation skills:</b> 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	
<b>Audience control:</b> Maintain good eye contact; enthusiastic; use the unexpected to full advantage; hold the audience's attention throughout; finish within the allotted time	
<b>Total:</b> 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
<b>Points</b>	19-20	17-18	15-16	13-14	0-12

#### Adjustment for individual student's presentation performance

Student	Performance / Comments