

## Course Outline

**Course Code** : DAO2703  
**Course Title** : Operations and Technology Management  
**Class Date** : From 10/8/2026 To 13/11/2026  
**Semester** : Semester 1, Academic Year 2026/2027  
**Faculty** : Dr Chen Kim Heng; Mr. Zheng Peng  
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### Overview

Operations and Technology Management (OTM) is a classic functional area of management that deals with the problems of production in all kinds of enterprises. It focuses on the productive system of the enterprise, which we define as the means by which resource inputs are transformed into useful outputs of goods and services.

While Operations and Technology Management is a traditional functional field, and while this course will follow an outline built around the traditional foundational topics of OTM, we will nevertheless attempt to highlight some of the more current issues that are relevant within these topics. In view of this, the course will consider issues pertaining to both manufacturing and services-oriented systems, highlight the strategic aspects of operations, evaluate the significance and implications of advanced process technologies like robotics, AI and flexible manufacturing systems, examine the principles of sustainable operations management, and explain the strategic significance of practices such as Japanese manufacturing techniques and philosophies like Lean and Total Quality Management.

### Course Objectives

The primary objectives of this course are to introduce students to the substantive knowledge developed in the field of Operations and Technology Management and to highlight the function's ongoing strategic relevance in any enterprise.

### Assessment

| Assessment Components                     | Weightage |
|-------------------------------------------|-----------|
| Class Participation (Individual & Group*) | 20%       |
| Project (Individual & Group*)             | 20%       |
| Closed-book Final Exam (Individual)       | 50%       |
| Peer Evaluation (Individual)              | 10%       |

*\* Instructors reserve the right to adjust a student's grade whenever necessary.*

## **Schedule and Outline**

| <b>Lesson/<br/>Week</b> | <b>Date</b>   | <b>Session</b><br>(lesson summary or outline / learning objectives / preparation / cases & assignments / follow-up readings & resources) |
|-------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1                       | 10/8 – 14/8   | <b><i>Public Holiday on 10 August (No class)</i></b>                                                                                     |
| 2                       | 17/8 – 21/8   | Introduction OTM                                                                                                                         |
| 3                       | 24/8 – 28/8   | Operations Processes and Process Analysis                                                                                                |
| 4                       | 31/8 – 4/9    | Managing Waiting Line & Aggregate Planning                                                                                               |
| 5                       | 7/9 – 11/9    | Quality Management                                                                                                                       |
| 6                       | 14/9 – 18/9   | Inventory Management I                                                                                                                   |
| 19/9 – 27/9             |               | <b><i>Recess Week (No Class)</i></b>                                                                                                     |
| 7                       | 28/9 – 3/10   | Inventory Management II                                                                                                                  |
| 8                       | 5/10 – 9/10   | Material Requirements Planning (MRP)                                                                                                     |
| 9                       | 12/10 – 16/10 | Lean Operations and Operations Strategy                                                                                                  |
| 10                      | 19/10 – 23/10 | Supply Chain Management (SCM) & Sustainable Operations Management (SOM)                                                                  |
| 11                      | 26/10 – 30/10 | Course Wrap-up; Project Presentations                                                                                                    |
| 12                      | 2/11 – 6/11   | Project Presentations                                                                                                                    |
| 13                      | 9/11 – 13/11  | Project Presentations                                                                                                                    |

## **Academic Honesty & Plagiarism**

Academic integrity and honesty are essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity & honesty at all times. Academic dishonesty is any misrepresentation with the intent to deceive, or failure to acknowledge the source, or falsification of information, or inaccuracy of statements, or cheating at examinations/tests, or inappropriate use of resources.

Plagiarism is 'the practice of taking someone else's work or ideas and passing them off as one's own' (The New Oxford Dictionary of English). The University and School will not condone plagiarism.

Artificial Intelligence (AI) tools such as ChatGPT do not require specialist knowledge to use. Many of these AI tools are commonly used in social media, for example, to create content and disguise and refine content created from programmes like ChatGPT. We understand that students will be drawn to using these AI Tools, as they would for any other electronic aid.

However, to be clear, normal academic rules still apply. As noted in the Code of Student Conduct: "The University takes a strict view of cheating in any form, deceptive fabrication, plagiarism and violation of intellectual property and copyright laws. Any student who is found to have engaged in such misconduct is subject to disciplinary action by the University."

With respect to AI tools (e.g., ChatGPT and image generation tools), your instructor will clarify whether the use of these tools as inputs into your assignment development process is acceptable. AI is a technology that requires skill to use, and knowledge about when and how to use it. If you use ChatGPT or any other such AI tool in your work, you must provide a proper representation of how you used the tool and what prompts you used to generate output. Failure to cite its use constitutes academic misconduct.

Further, as with any information source, be aware that minimal efforts yield low quality results. You will need to refine your work and fact check the output, as you would double-check information from any

source. Further, you should be selective in how and when you use such tools instead of using it for each and every assignment you create.

To summarise:

1. Always check with your instructors on what are the permitted uses of AI tools.
2. Have a discussion at the start of a course about the use of AI.
3. Where permitted, acknowledge your use of AI.
4. You remain responsible for the quality of your work and its appropriate representation.
5. Failure to follow the above steps can lead to a concern about plagiarism (academic dishonesty).

As always, you have the obligation to make clear to the assessor which is your own work, and which is the work of others. Otherwise, your assessor is entitled to assume that everything being presented for assessment is entirely your own work. This is a minimum standard.

**Additional guidance is available at:**

- Admission Condition: <https://www.nus.edu.sg/registrar/administrative-policies-procedures/acceptance-record#NUSCodeofStudentConduct>
- NUS Code of Student Conduct: <http://nus.edu.sg/osa/resources/code-of-student-conduct>
- Academic Integrity Essentials: <https://libguides.nus.edu.sg/new2nus/acadintegrity#s-lib-ctab-22144949-4>
- Guidelines on the Use of AI Tools For Academic Work: <https://libguides.nus.edu.sg/new2nus/acadintegrity#s-lib-ctab-22144949-3>