

Course Outline

Course Code : DAO2703
Course Title : Operations and Technology Management
Class Date : 14 Aug 2023 – 17 Nov 2023
Semester : Semester 1, Academic Year 2023/2024
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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, and explain the strategic significance of practices such as those of Japanese manufacturing techniques and philosophies like Just-in-Time and Total Quality Management, and those relating to the Theory of Constraints.

Course Objectives

The primary objectives of the course are to provide students with an introduction to, and an understanding of, the substantive knowledge which has developed over the years in the field of Operations and Technology Management, and to highlight the current relevance and strategic significance of the operations function in any given enterprise.

Assessment

Assessment Components	Weightage
Tutorial Participation	15%
Project Presentation	10%
Project Report	20%
Final Exam (Closed Book)	50%
Peer Evaluation	05%

Course Topics

1. Introduction to Operations Management
2. Operations Processes and Technologies
3. Process Analysis
4. Aggregate Planning
5. Material Requirements Planning
6. Operations Scheduling
7. Inventory Management I
8. Inventory Management II
9. Waiting Line (Queue) Management
10. Quality Management
11. Lean Operations
12. Operations Strategy

A detailed Course Schedule and Contents (including Tutorials) will be made available closer to start of the Semester. Tutorial sheets containing questions for discussion and problems for practice will be made available for each tutorial.

Students are expected to come to lectures and tutorials prepared for the topic of the week by working on the Readings that will be indicated in the detailed Course Schedule and the Tutorial sheet for the week.

General Guide & Reading

Textbooks:

- William J. Stevenson, Operations Management, 14th Edition, 2021, McGraw Hill.
- Cachon, Gerard, and Christian Terwiesch. Matching Supply with Demand: An Introduction to Operations Management, 5th ed., McGraw Hill, 2024. (Optional)

Academic Honesty & Plagiarism

Academic integrity and honesty is 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. Students should adopt this rule - 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 being presented as entirely your own work. This is a minimum standard. In case of any doubts, you should consult your instructor.

Additional guidance is available at:

- [Administrative Policies](#)
- <http://www.nus.edu.sg/registrar/administrative-policies-procedures/acceptance-record#NUSCodeofStudentConduct>
- <http://nus.edu.sg/osa/resources/code-of-student-conduct>