



## Course Outline

### OM 201 Principles of Operations Management / OM 201 Operations Management

Semester 1/2020 (August 10-November 28, 2020)

|                           |  |
|---------------------------|--|
| <b>Number of Credits:</b> | 3 credits (3-0-9)  |
| <b>Lecture Time:</b>      | Fridays; 2.00 - 5.00 p.m.  |
| <b>Lecture Venue:</b>     | Room 206, Faculty of Economics<br>Thammasat University, Tha Prachan campus                                     |
| <b>Instructors:</b>       |  |
| Instructor's Name:        | Assistant Professor Dr.Panuwong Kumpirarusk<br>Assistant Professor Akekarin Yolrabil<br>Dr. Chintanai Praisont |
| Course Coordinator        | Assistant Professor Dr.Panuwong Kumpirarusk  |
| Office:                   | Room F310 (Office of MBA Program), Anek Prasong II Building  |
| Office Hours:             | Fridays, 1.00 - 2.00 pm  |
| Contact Information:      | panuwong@tbs.tu.ac.th  |

#### Course Description:

Study of concepts, techniques and tools to design, analyze, and improve core operational capabilities, and their application to a broad range of industries. Topics include operations strategy, productivity, product/service design, process design, quality management, inventory management, project management, supply chain management, operational performance measurement, and operations for sustainability.

#### Course Objectives:

The objective of this course is to provide students with basic concepts and techniques in managing the operations of a production unit and/or a service organization, which leads to achieve excellent and sustainable operation and supply chain.

**Teaching Materials and Resources:**

**Main Texts:**

*“Operations Management: Sustainability and Supply Chain Management”* Global edition, 12<sup>th</sup> Edition, By Jay Heizer, Barry Render, Chuck Munson, Pearson, ISBN:9781292148632, Published:2017

**Required Readings/Course Materials:**

Teaching notes and coursework from lecturer(BE Moodle)

**Evaluation Methods:**

| Methods/Activities          | Week  | Weighted score |
|-----------------------------|-------|----------------|
| Participation               | 2-15  | 10%            |
| Group assignments (3 x 10%) | 3,4,9 | 30%            |
| In-class Quiz (1 x 10%)     | 11    | 10%            |
| Mid-term Examination        |       | 25%            |
| Final exam                  |       | 25%            |
| <b>Total</b>                |       | <b>100%</b>    |

**Grading Criteria:**

| Grades | Percentage |
|--------|------------|
| A      | 85-100     |
| B+     | 75-84      |
| B      | 70-74      |
| C+     | 65-69      |
| C      | 60-64      |
| D+     | 50-59      |
| D      | 40-49      |
| F      | 0-39       |

**Teaching-Learning Methods:**

- Lecture on theoretical concepts
- Case discussion and assignments
- Quizzes

**Class Policy:**

- Students shall read suggested textbooks or teaching notes before classes.
- Students shall contribute reasonable effort to classes and group assignments.
- Students shall check plagiarism and grammar in their reports or assignments before submission.
- Students shall prepare and submit their reports and assignments according to given instructions. Late submission may be rejected or lead to point deduction.
- Students shall not eat or use telephone during the class.

**Expected Learning Outcomes:**

|     | <b>1.Morality and Ethics:</b>  | <b>Expected Learning Outcomes:</b>   |
|-----|--|--|
| ●   | 1.1 Possess honesty, sacrifice, self, social, and environmental responsibility.  | <ul style="list-style-type: none"> <li>- Attend classes with good manners and punctuality.</li> <li>- Plagiarism and wrong grammar in reports or assignments shall be not apparent.</li> <li>- Submit assignments and reports on time.</li> <li>- Corporate social responsibility, social enterprise and other sustainability concepts shall be integrated in reports or assignments.</li> </ul> |
| N/A | 1.2 Value "sufficiency" theory and adapt it in life path by adhering to adequacy, rationale, and immunity development. |  |
| N/A | 1.3 Value disciplines, respect, and comply with the rules and regulations of the institution and society at large.     |  |
| N/A | 1.4 Acquire knowledge related to business morality and ethics, and be able to handle ethical dilemma with integrity.   |  |
|     | <b>2.Knowledge:</b>  | <b>Expected Learning Outcomes:</b>   |
| N/A | 2.1 Acquire knowledge on and understand the important concepts in business management.                                 |  |

|    |  |  |
|----|--|--|
| ●  | 2.2 Acquire knowledge on and understand the important social and science concepts related to business management.  | - Major social and science concepts related to business management shall be applied in reports or assignments.   |
| ●  | 2.3 Acquire knowledge on and understand the important concepts related to business processes, planning, corporate structures, operations, control, performance evaluation and contingency plan to suit the circumstances.                  | - Major operations management concepts shall be tested in midterm and final examinations.  |
| ●  | 2.4 Acquire the knowledge on academic advancement and professional development in business management including the understanding of the situational adaptability and its impacts on business.   | - Analysis of real cases with poor operations shall be done in reports or assignments.   |
|    | <b>3.Intellectual Development:</b>   | <b>Expected Learning Outcomes:</b>   |
| NA | 3.1 Be able to search and process information and utilize various concepts appropriately in a given circumstance in order to obtain relevant information to benefit in the rapidly changing business environment.                          |  |
| ●  | 3.2 Be able to think systematically, rationally and creatively and to integrate knowledge from other disciplines to solve the problems in business and other settings.   | - Analysis of real cases with poor operations shall be done in reports or assignments.   |
| NA | 3.3 Be able to collectively propose solutions to problems at hand and analyze the impacts of the proposed solutions and be able to choose the solution that is appropriate to a given situation to ensure business competitive advantages. |  |
|    | <b>4.Interpersonal Skills and Responsibilities:</b>  | <b>Expected Learning Outcomes:</b>   |
| ●  | 4.1 Be able to work in team, possess interpersonal skills and leadership skills, and be professionally adaptive to a given situation.  | - Accomplish group assignments and group presentations with reasonable effort.<br><br>- Human relations and other social skills shall be gradually improved. |
| NA | 4.2 Be creative and constructively criticize to solve problem of the team.   |  |
| NA | 4.3 Be responsible in lifelong learning to develop self and professional career.   |  |
|    | <b>5.Quantitative Analysis, Communication and Information Technology:</b>  | <b>Expected Learning Outcomes:</b>   |
| ○  | 5.1 Be able to apply mathematics, statistics, quantitative analysis in analyzing and making decisions in business and daily life.  | - Statistical and quantitative analysis shall take part in midterm and final examinations.   |
| NA | 5.2 Be able to efficiently communicate in Thai and foreign languages that are relevant in doing  |  |

|   |   |   |
|---|---|---|
|   | business.   |   |
| ● | 5.3 Be able to explain the issues and make the issues clear in verbal or writing, and be able to choose the appropriate pattern of communication for different groups of audience both in business context and in other contexts. | <ul style="list-style-type: none"> <li>- Well-organized structure of written reports or assignments shall be apparent.</li> <li>- Professional presentation shall be proven and competitive in reports or assignments.</li> </ul> |
| ○ | 5.4 Be able to utilize the information technologies or others to support the business operations.   | <ul style="list-style-type: none"> <li>- Solutions and recommendations based on recent technologies shall be proposed in reports or assignments.</li> </ul>   |

**Teaching Plans:**

| Week | Date                                     | Topic   | Business Plan Competition   |
|------|--|---|---|
| 1    | 14 August                                | <b>Course Introduction</b> <ul style="list-style-type: none"> <li>• Course syllabus</li> <li>• Learning Expectation</li> </ul> <b>Introduction to Operations Management</b> <ul style="list-style-type: none"> <li>• Concepts of Operations Management</li> </ul> | Lecture & discussion<br><b>Chapter 1</b>  |
| 2    | 21 August                                | <b>Productivity</b> <ul style="list-style-type: none"> <li>• Importance of productivity</li> <li>• Types of productivity &amp; calculation</li> </ul>   | Lecture & practice<br><b>Chapter 1</b>  |
| 3    | 28 August                                | <b>Product and Service Design</b> <ul style="list-style-type: none"> <li>• Design of Product</li> <li>• Design of Service</li> </ul> <b>Assignment on Product &amp; Service Design (10%)</b>  | Lecture & Assignment<br><b>Chapter 5</b><br>Assignment # 1 (10%)<br><b>Dr. Chintanai Praisont</b> |
| 4    | 11 September                             | <b>Operations Strategies for Sustainability (1/2)</b> <ul style="list-style-type: none"> <li>• Mission, Vision &amp; Core Competencies</li> <li>• Generic Operations Strategies</li> </ul> <b>Assignment on Strategy Formulation (10%)</b>                        | Lecture & discussion<br><b>Chapter 2</b><br>Assignment #2 (10%)                                   |
| 5    | 18 September                             | <b>Operations Strategies for Sustainability (2/2)</b> <ul style="list-style-type: none"> <li>• Global Issues in Sustainability</li> <li>• Corporate Social Responsibility (CSR)</li> </ul>  | Lecture & discussion<br><b>Chapter 2</b>  |
| 6    | Make up class<br>23 September,<br>5-8 PM | <b>Quality Management (1/2)</b> <ul style="list-style-type: none"> <li>• Total Quality Management (TQM)</li> <li>• Quality Improvement (QC Tools)</li> <li>• Cost of Quality</li> </ul>   | Lecture & discussion<br><b>Chapter 6</b>  |
| 7    | 25 September                             | <b>Quality Management (2/2)</b> <ul style="list-style-type: none"> <li>• International Standards for Management Systems</li> </ul>  | Lecture & discussion<br><b>Chapter 6</b>  |
|      | 2 October<br>3-6 PM                      | <b>Mid-term examination (Written Exam, only)</b>  | Closed book exam (25%)  |

| Week | Date  | Topic   | Business Plan Competition  |
|------|---|---|--|
| 8    | 9 October   | <b>Process Design (1/2)</b> <ul style="list-style-type: none"> <li>• Process Strategies</li> <li>• Facility Layout</li> <li>• Process Analysis and Design</li> </ul>  | Lecture & Assignment<br><b>Chapter 7</b><br><b>Dr. Chintanai Praisont</b>                        |
| 9    | 16 October  | <b>Process Design (2/2)</b> <ul style="list-style-type: none"> <li>• Process Tools and Improvement</li> </ul> <b>Assignment on Process Design (10%)</b>   | Lecture & Assignment<br><b>Chapter 7</b><br>Assignment #3 (10%)<br><b>Dr. Chintanai Praisont</b> |
| 10   | Wed.21 October,<br>2-5PM, 5 <sup>th</sup> Floor,<br>Meeting Room  | <b>Inventory Management (1/2)</b> <ul style="list-style-type: none"> <li>• Importance of inventory</li> <li>• Models of inventory management</li> <li>• Economic order quantity (EOQ)</li> </ul>                  | Lecture & discussion<br><b>Chapter 12</b>  |
| 11   | Wed.28 October,<br>2-5PM, 5 <sup>th</sup> Floor,<br>Meeting Room  | <b>Inventory Management (2/2)</b> <ul style="list-style-type: none"> <li>• Production order quantity (POQ) calculation</li> <li>• Quantity discount model calculation</li> </ul>                                  | Lecture & discussion<br><b>Chapter 12</b><br>Quiz #1 (10%)                                       |
| 12   | 6 November  | <b>Project Management</b> <ul style="list-style-type: none"> <li>• Importance of Project Management</li> <li>• Project Management Techniques: CPM</li> <li>• Cost-Time Trade-Offs and Project Crashing</li> </ul> | Lecture & discussion<br><b>Chapter 3</b><br><b>Asst.Prof. Akekarin Yolrabil</b>                  |
| 13   | 13 November   | <b>Lean Operations (1/2)</b> <ul style="list-style-type: none"> <li>• Lean Concepts</li> <li>• Seven Wastes</li> </ul>  | Lecture & discussion<br><b>Chapter 16</b>  |
| 14   | Wed.18 November,<br>2-5PM, 5 <sup>th</sup> Floor,<br>Meeting Room | <b>Lean Operations (2/2)</b> <ul style="list-style-type: none"> <li>• Toyota Production System</li> <li>• Small Lot Production</li> <li>• Kanban System</li> </ul>  | Lecture & discussion<br><b>Chapter 16</b>  |
| 15   | 27 November   | <b>Supply Chain Management</b> <ul style="list-style-type: none"> <li>• Sourcing Strategy</li> <li>• Supply Chain Risk</li> <li>• Measuring Supply Chain Management</li> </ul>                                    | Lecture & discussion<br><b>Chapter 11</b>  |
|      | 2 December<br>1.30 -4.30 PM.                                      | <b>Final Examination (Written Exam, only)</b>   | Closed book exam (25%)   |