

Hong Kong Baptist University
Faculty of Science
Department of Mathematics

Title (Units): ORBS7020 Techniques of Production Operations Management (3,3,0)

Course Aims: This course introduces students systematically to the range of activities involved in Production and Operations Management for industrial development, mainly adopting quantitative approaches and the main quantitative and other analytical approaches used in Productions and Operations Management (and related areas).

Prerequisite: No

Prepared by: Luo Dehui

Remark: This course is delivered by staff of HKBU.

Course Intended Learning Outcomes (CILOs):

Upon successful completion of this course, students should be able to:

No.	Course Intended Learning Outcomes (CILOs)
1	Explain in a systematic manner the range of activities involved in Production and Operations Management for industrial development, mainly adopting quantitative approaches.
2	Apply the main quantitative and other analytical approaches used in Productions and Operations Management (and related areas).
3	Apply the basic calculations and other analytical activities associated with these techniques, and have insight into the problems and possibilities associated with their use in practice.

Teaching & Learning Activities (TLAs):

CILO	TLAs will include the following:
1,2,3	The sessions will mix lecture with students' working on example problems. Approximately two thirds of the time will consist of lectures, and one third exercises. Knowledge of the techniques will be imparted during the lecture and will form the basis of the students' understanding.
1,2,3	The exercises will develop students' ability to apply techniques in a discerning manner and also reinforce their understanding of the relevant theory.

Assessment:

No.	Assessment Methods	Weighting	CILO Addressed	Remarks
1	Assignment	40%	all	Assignments are designed to measure students' understanding of the theory, techniques, and applications of production operations management. Projects are conducted to monitor the students' understanding of the theory, techniques and skills taught in the class. This may involve, but not limited to, in-class discussions of rigorous technical problems and their solutions.
2	Final Examination	60%	all	Final Examination is designed to see how far students have achieved their intended learning outcomes especially in the knowledge domain. Students should have a thorough understanding of the knowledge and

				apply them correctly in different context to do well in the exam.
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Course Intended Learning Outcomes and Weighting:

Content	CILO No.	Teaching (in hours)
1. Operations Management	1,2	9
2. Designing Operations	1,2,3	12
3. Managing Operations	1,2,3	18

References:

1. Heizer, J. and Render, B. (2006), *Operations Management (8th edition)*, Pearson Education.
2. Slack, Chambers, Johnston, Betts, (2006), *Operations and Process Management: Principles and Practice For Strategic Impact*, FT Prentice Hall.
3. Krajewski and Ritzman, (2007), *Operations Management - Processes and Value Chains*, 8th ed., FT Prentice Hall.
4. Chase, Jacobs and Aquilano (2003), *Operations Management for Competitive Advantage*, 10th ed., McGraw-Hill.

Course Content in Outline:

<u>Topics</u>	<u>Hours</u>
1. Operations Management <ul style="list-style-type: none"> • Operations and Productivity • Operations Strategy in a Global Environment 	9
2. Designing Operations <ul style="list-style-type: none"> • Design of Goods and Services • Managing Quality • Facilities Location • Facilities Layout 	12
3. Designing Operations <ul style="list-style-type: none"> • Supply Chain Management • Capacity/Aggregate Planning • MRP • Scheduling • Inventory Management • Enterprise Resource Planning • Aspects of e-commerce 	18

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