

The Hong Kong Polytechnic University

Subject Description Form

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| Subject Code | LGT2106 |
| Subject Title | Principles of Operations Management |
| Credit Value | 3 |
| Level | 2 |
| Normal Duration | 1-semester |
| Pre-requisite / Co-requisite/ Exclusion | Nil |
| Role and Purposes | Operations Management (OM) is a functional field of management encompassing the design, operation and improvement of the processes and systems employed in the creation and delivery of an organization's products and services. |
| Subject Learning Outcomes | <p>Upon completion of the subject, students will be able to:</p> <ul style="list-style-type: none"> (a) Distinguish the main principles of operations management. (b) Demonstrate how service and manufacturing operations create value in the processes (Outcome 8). (c) Recognize the key techniques and concepts that exist within operations management. (d) Apply the various models and approaches of operations management to inform decision making in a real business situation (Outcome 10). |
| Subject Synopsis/ Indicative Syllabus | <p>Introduction Defining operations management. Relationship of business operations processes with other functions. Managerial roles and skills in the operations function.</p> <p>Designing operations systems and processes Process management, managing projects, managing information technology, Enterprise Resource Planning (ERP) systems.</p> <p>Managing quality Quality characteristics. Quality control. Quality assurance. Total quality management. Quality costs. Statistical quality control.</p> <p>Managing capacity Economies and diseconomies of scale. Capacity planning. Aggregate planning. Capacity requirement planning. Master production schedule.</p> <p>Facility planning Facility location. Layout of the facility. Processes design for service providers and manufacturers.</p> |

| | <p>Demand management Forecasting, qualitative forecasting, quantitative forecasting, forecasting accuracy.</p> <p>Operations scheduling Scheduling n jobs on one machine and two machines. Scheduling workers in service operations.</p> <p>Managing the future challenges Lean production systems, Just-in-time concepts, Kanban system, lean systems in services.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>Teaching/Learning Methodology</p> | <p>Lectures are designed to provide a basic grounding in principles, concepts and techniques in operations management, and to provide a basis for further analysis and application of the techniques in organizations.</p> <p>Tutorials provide the environment and means for student-centered learning, in the form of class discussions, case analysis, group and individual work, designed to stimulate original and creative thinking, and the capacity to apply the tools and techniques to the solution of operations problems.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Assessment Methods in Alignment with Intended Learning Outcomes</p> | <table border="1" data-bbox="534 913 1485 1585"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="4">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>Continuous Assessment</td> <td>50%</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Class participation – 5%</td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Quizzes – 10%</td> <td></td> <td>✓</td> <td>✓</td> <td></td> <td>✓</td> </tr> <tr> <td>Case report – 15%</td> <td></td> <td>✓</td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>Midterm quiz – 20%</td> <td></td> <td>✓</td> <td>✓</td> <td></td> <td>✓</td> </tr> <tr> <td>Final exam</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Total</td> <td>100 %</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p><i>To pass this subject, students are required to obtain Grade D or above in BOTH the Continuous Assessment and Examination components.</i></p> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Assessment of coursework includes class participation, case report, quizzes and tests. The quizzes, tests and final exam will cover all topics in the syllabus, with a focus of testing students’ understanding on the concepts of operations management, key techniques of operations management strategies on achieving the firm’s organization goals. The case report will assess the students’ analytical skill on evaluating the business performance of a firm with its operations management practices. The class participation is assessed to ensure students actively participate in class discussion for promoting more interactive learning environment.</p> | Specific assessment methods/tasks | % weighting | Intended subject learning outcomes to be assessed (Please tick as appropriate) | | | | a | b | c | d | Continuous Assessment | 50% | | | | | Class participation – 5% | | ✓ | ✓ | ✓ | ✓ | Quizzes – 10% | | ✓ | ✓ | | ✓ | Case report – 15% | | ✓ | | | ✓ | Midterm quiz – 20% | | ✓ | ✓ | | ✓ | Final exam | 50% | ✓ | ✓ | ✓ | ✓ | Total | 100 % | | | | |
| Specific assessment methods/tasks | % weighting | | | Intended subject learning outcomes to be assessed (Please tick as appropriate) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | a | b | c | d | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Continuous Assessment | 50% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Class participation – 5% | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quizzes – 10% | | ✓ | ✓ | | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Case report – 15% | | ✓ | | | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Midterm quiz – 20% | | ✓ | ✓ | | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Final exam | 50% | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 100 % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Student Study Effort Expected | Class contact: | |
| | ▪ Lectures | 26 Hrs. |
| | ▪ Tutorials | 13 Hrs. |
| | Other student study effort: | |
| | ▪ Preparation for discussion | 45 Hrs. |
| | ▪ Preparation for project/ assignments/ Exams | 42 Hrs. |
| | Total student study effort | 126 Hrs. |
| Reading List and References | <p><u>Recommended Textbooks</u></p> <p>Chase, R. B., and Jacobs, F. R., (2017), Operations and supply chain management (15th ed.), McGraw-Hill.</p> <p>Jacobs, F. R., and Chase, R. B., (2016), Operations and Supply Management: The Core (4th ed.), McGraw-Hill.</p> <p>Heizer, J., Render, B. & Munson, C. (2016), Operations Management : Sustainability and Supply Chain Management (12th ed.), Pearson/Prentice Hall.</p> <p><u>Useful Reference</u></p> <p>Krajewski, L. J., Malhotra, M. K., Ritzman, L. P., (2015), Operations management: processes and supply chains (11th ed.), Pearson/Prentice Hall.</p> <p>Schroeder, R. G., Rungtusanatham, M. J., Goldstein, S. M., (2017), Operations management in the supply chain: decisions and cases (7th ed.), McGraw-Hill.</p> | |