



**Course: Master of Business Administration**

**Subject length: 12 weeks**

**Pre-requisites: N/A**

**Subject code and title: MGMT 6003 Operations Management**

**Course development completion:** [Click here to enter a date.](#)

### Subject Description

This subject examines the key issues currently facing all organisations when creating products and services for highly competitive and rapidly changing markets. Outperforming competitors will require building a sustainable competitive advantage around operations through the design of operations processes, and the operation of these processes. Students will gain an understanding of the theories, concepts and models that support operations from a strategic perspective, design, measurement and performance management of operations, key implementation decisions, supply chain management, the impact of e-commerce and technology, and analysis, decision-making and communication of outcomes to diverse audiences.

### Subject Modules

Module 1	Managing operations strategically in a global environment
Module 2	Managing processes and product quality
Module 3	Strategic planning of operations methods
Module 4	Materials and inventory management
Module 5	The lean organisation
Module 6	Implementing and assessing best practice



## Course texts and other learning resources

### Required Textbook

Russell, R.S. & Taylor, B.W. (2011) *Operations Management: Creating Value Along the Supply Chain*, 7th edition, John Wiley & Sons, Hoboken, New Jersey.

### Websites

*The Institute for Operations Research and the Management Sciences*  
<http://www.informs.org>

*Institute of Business Forecasting & Planning*  
<http://www.ibf.org>

*American Society for Quality*  
<http://www.asq.org>

*International Organization for Standardisation (ISO)*  
<http://www.iso.ch>

*Baldrige Performance Excellence Program*  
<http://www.nist.gov/baldrige>

### Recommended Readings

Dumond, E.J. (2000) 'Value management: an underlying framework', *International Journal of Operations and Production Management*, 20(9): 1062–1077.

Brown, S., Squire, B. & Blackmon, K.(2007) 'The contribution of manufacturing strategy involvement and alignment to world-class manufacturing performance', *International Journal of Operations & Production Management*, 27(3): 282–302.

Swamidass, P.M., Baines, T. & Darlow, N. (2001) 'The role of manufacturing and marketing managers in strategy development: Lessons from three companies', *International Journal of Operations and Production Management*, 21(7): 933–948.



Module	Subject learning outcomes addressed	Engagement Activities	Resources	Assessment
1	<p>Identify the critical components of operations management function in differing organisations and clearly demonstrate their relationship to decision making and value chain</p> <p>Critically evaluate the role of operations management in the strategic management of organisations and supply chains</p>	<p>Look in the latest annual report of an organisation of your choice. Find the mission statement, strategic objectives and an outline of the operational performance achieved for the previous 12 months. Based on your analysis, do you believe that the organisation places high priority on operations management? High priority will be evident if the organisation has mentioned its operations strategy in its mission statement and/or business strategy, and discusses its production/service targets and how they affected its corporate performance.</p> <p>For an organisation of your choice (manufacturing or services), draw a diagram identifying the elements of its value chain.</p> <p>Obtain your organisation's business plan, or other planning documents, and identify the operations strategy formulation and implementation process, and the CSFs. Compare the planned approach with the actual approach that takes place in the organisation. Do they align? If not, why not, and how could they be aligned?</p> <p>Identify the competitive priorities (CSFs) in</p>	<p>Russell, R.S. &amp; Taylor, B.W. (2011) <i>Operations Management: Creating Value Along the Supply Chain</i>, 7th edition, John Wiley &amp; Sons, Hoboken, New Jersey. Chapter 1, pp. 1–31</p> <p>Dumond, E.J. (2000) 'Value management: an underlying framework', <i>International Journal of Operations and Production Management</i>, 20(9): 1062–1077.</p> <p>Brown, S., Squire, B. &amp; Blackmon, K.(2007) 'The contribution of manufacturing strategy involvement and alignment to world-class manufacturing performance', <i>International Journal of Operations &amp; Production Management</i>, 27(3): 282–302.</p> <p>Swamidass, P.M., Baines, T. &amp; Darlow, N. (2001) 'The role of manufacturing and marketing managers in strategy development: Lessons from three companies', <i>International Journal of Operations and Production Management</i>, 21(7): 933–948.</p>	<p>Students will create an operations plan and a process map for a product or service, including finding a suitable mechanism/methodology by which to present it.</p> <p>(Due in Module 3)</p>



		a service organisation of your choice. What is the role of the operations manager in ensuring that these CSFs are achieved in the organisation?		
2	<p>Evaluate, apply and articulate the principles and quantitative methodologies to assist decision-making in operations process planning, scheduling and inventory management.</p> <p>Critically evaluate the role of operations management in the strategic management of organisations and supply chains</p>	<p>Visit <a href="http://www.annualreports.com">http://www.annualreports.com</a> and obtain the annual report for an organisation of your choice. Search through the document to find the organisation's technology strategy. You may find in some cases that the technology strategy is articulated in the mission statement of the organisation</p> <p>Conduct a brief scan of your organisation, or one with which you are familiar, to identify manufacturing and/or services that have been automated in the past couple of years. Why were the particular processes automated? Did the automation improve productivity, quality and reliability? If not, could the reasons have been foreseen if a more strategic decision-making process had been used?</p> <p>Select an e-business process between an organisation you are familiar with and a customer or supplier. What are the advantages and disadvantages for both the organisation and the customer/supplier of using this type of communication? Do the</p>	<p>Russell, R.S. &amp; Taylor, B.W. 2011) <i>Operations Management: Creating Value Along the Supply Chain</i>, 7th edition, John Wiley &amp; Sons, Hoboken, New Jersey. Chapters 2, 4, 5 and 6</p> <p>Sohal, A.S., Moss, S. &amp; Ng, L. (2001) 'Comparing IT success in manufacturing and service industries', <i>International Journal of Operations and Production Management</i>, 21(1/2): 30–45.</p> <p>Sroufe, R., Curkovic, S., Montabon, F. &amp; Melnyk, S.A. (2000) 'The new product design process and design for environment: crossing the chasm', <i>International Journal of Operations and Production Management</i>, 20(2): 267–291.</p> <p>Martin, I. &amp; Cheung, Y. (2005) 'Business process re-engineering pays after enterprise resource planning', <i>Business Process Management Journal</i>, 11(2): 185–197.</p> <p>Prajogo, D.I. &amp; Sohal, A.S. (2006) 'The relationship between organization strategy, total quality management</p>	<p>Students will create an operations plan and a process map for a product or service, including finding a suitable mechanism/methodology by which to present it.</p> <p>(Due in Module 3)</p>



		<p>benefits outweigh the costs?</p> <p>Identify the core and non-core processes within your organisation, or an organisation with which you are familiar. What criteria did management apply to outsource some of the processes?</p> <p>Select a process with which you are familiar. Draw a flowchart of the various functions of the 'is' process. Based on what you have learned so far, draw a flowchart for the way you think the process 'should be' in terms of cost, quality, cycle time, etc. Write some brief notes on how you would reengineer the process from the current state to the desired state.</p>	<p>(TQM), and organization performance—the mediating role of TQM', <i>European Journal of Operational Research</i>, 168: 35–50.</p> <p>Maull, R., Brown, P. &amp; Cliffe, R. (2001) 'Organisational culture and quality improvement', <i>International Journal of Operations &amp; Production Management</i>, 21(3): 302–326.</p> <p>Terziovski, M. (2002) 'Beyond the fads: what can we learn from Deming's profound knowledge', <i>The 7th International Conference on ISO 9000 and TQM</i>, RMIT University, Melbourne.</p>	
3	Identify the critical components of operations management function in differing organisations and clearly demonstrate their relationship to decision making and value chain	Make an estimate of your organisation's quality costs in the four categories (internal failure, external failure, appraisal and prevention). What percentage of total quality costs does each category contribute? Rank the cost categories from highest to lowest. What recommendation would you make to management regarding their efforts to reduce the cost of quality?	<p>Russell, R.S. &amp; Taylor, B.W. (2011) <i>Operations Management: Creating Value Along the Supply Chain</i>, 7th edition, John Wiley &amp; Sons, Hoboken, New Jersey. Chapters 7 and 12.</p> <p>Ashayeri, J. &amp; Selen, W. (2005) 'An application of a unified capacity planning system', <i>International Journal of Operations &amp; Production</i></p>	<p>Students will create an operations plan and a process map for a product or service, including finding a suitable mechanism/methodology by which to present it.</p> <p>(Due in Module 3)</p>



		<p>Choose a product or service and apply the QFD process by constructing a 'house of quality' to analyse the quality of its design, using estimates and realistic guesses where real data are not available. From the list, identify benefits that may be obtained if your organisation applied the QFD concept.</p> <p>Investigate the types of qualitative forecasting techniques used in your organisation. How do senior managers identify the appropriate forecasting technique to use in different circumstances? Do you think these techniques are used appropriately in your organisation?</p>	<p><i>Management</i>, 25(9): 917–937.</p>	
4	<p>Evaluate, apply and articulate the principles and quantitative methodologies to assist decision-making in operations process planning, scheduling and inventory management.</p>	<p>What criteria are used for purchasing decisions of key components in the supply chain in your organisation (or one with which you are familiar)?</p> <p>What are the critical issues in the supply chain in your organisation? For example, has the decision whether to make or buy certain components been debated recently; and do you have single or multiple competing suppliers?</p> <p>How are supply chain management responsibilities allocated and viewed in your organisation? Is supply chain management perceived by senior</p>	<p>Russell, R.S. &amp; Taylor, B.W. (2011) <i>Operations Management: Creating Value Along the Supply Chain</i>, 7th edition, John Wiley &amp; Sons, Hoboken, New Jersey. Chapters 10, 13, 14, 15, 16, 17.</p> <p>Cucchiella, F. &amp; Gastaldi, M. (2006) 'Risk management in supply chain: a real option approach', <i>Journal of Manufacturing Technology Management</i>, 17(6): 700–720</p> <p>Yasin, M.M., Wafa, M.A. &amp; Small, M.H. (2001) 'Just-in-time implementation in</p>	<p>From a list of three samples, students will review a service process map of healthcare. Students will discuss how disruptive technologies could alter the process map.</p> <p>Students will then present the case for the disruptive technology to the hospital board using a presentation mechanism/methodology of their choice</p>



		<p>management as part of their competitive strategy, or simply something that they delegate to people at the shop-floor level?</p> <p>Investigate your own organisation to gather information about its e-business activities. What e-business techniques has the organisation introduced? Have these techniques made any difference to the overall operating costs or market reach of the organisation? How?</p> <p>Reflect on the planning approach used in your organisation, or an organisation you know, and how this aligns with the aggregate planning techniques described in Russell &amp; Taylor:</p> <ul style="list-style-type: none"><li>• How does your organisation answer the production capacity questions on page 630 in Figure 14.5?</li><li>• What measures does your organisation use to aggregate demand and capacity for different products?</li><li>• Does your organisation favour a 'demand matching' or 'level capacity' approach?</li><li>• What sorts of buffers does your organisation favour?</li><li>• Can you see an opportunity to improve the planning process in your organisation?</li></ul>	<p>the public sector: An empirical examination', <i>International Journal of Operations &amp; Production Management</i>, 21(9): 1195–1204.</p> <p>Webster, M., Muhlemann, A.P. &amp; Alder, C. (2000) 'Decision support for the scheduling of subcontract manufacture', <i>International Journal of Operations &amp; Production Management</i>, 20(10): 1218–1235.</p> <p>Gupta, M. &amp; Kohli, A. (2006) 'Enterprise resource planning systems and its implications for operations function', <i>Technovation</i>, 26: 687–696</p>	<p>(Due in Module 6)</p> <p><a href="http://www.gov.scot/Publications/2006/03/01111407/5">http://www.gov.scot/Publications/2006/03/01111407/5</a></p> <p><a href="https://www.lifenetems.org/wp-content/uploads/2015/03/LDTPROCESSMAP.gif">https://www.lifenetems.org/wp-content/uploads/2015/03/LDTPROCESSMAP.gif</a></p> <p><a href="http://image.slidesharecdn.com/12may1345deanblissstrackarev1-1324465696655-phpapp01-111221051739-phpapp01/95/lean-what-is-it-and-how-does-it-work-22-728.jpg?cb=1324445291">http://image.slidesharecdn.com/12may1345deanblissstrackarev1-1324465696655-phpapp01-111221051739-phpapp01/95/lean-what-is-it-and-how-does-it-work-22-728.jpg?cb=1324445291</a></p>
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5	<p>Critically evaluate the role of operations management in the strategic management of organisations and supply chains</p>	<p>Assess your own organisation and identify areas where there may be inefficient use of capital, materials and labour. How could you reduce this waste without affecting operations?</p> <p>Explain why you need to use flowcharting and control charts in lean production</p> <p>Assess an organisation you are familiar with to see if it could implement lean production. What major changes would have to occur to the systems in this organisation</p> <p>In your own organisation, identify three functions that could be outsourced. Explain why you have chosen these functions.</p>	<p>Goetsch, D.L. &amp; Davis, S. (2006) <i>Quality Management</i>, 5th edition, Prentice Hall, Saddle River, New Jersey. Chapter 21</p> <p>Arnheiter, E.D. &amp; Maleyeff, J. (2005) 'The integration of lean management and Six Sigma' <i>The TQM Magazine</i>, (17 (1): 5–18.</p> <p>Gottfredson, M., Puryear, R. &amp; Phillips, S. (2005) 'Strategic sourcing from periphery to core' <i>Harvard Business Review</i>, February, 83(2).</p>	<p>From a list of three samples, students will review a service process map of healthcare. Students will discuss how disruptive technologies could alter the process map.</p> <p><a href="http://www.gov.scot/Publications/2006/03/01111407/5">http://www.gov.scot/Publications/2006/03/01111407/5</a></p> <p><a href="https://www.lifenetems.org/wp-content/uploads/2015/03/LDTPROCESSMAP.gif">https://www.lifenetems.org/wp-content/uploads/2015/03/LDTPROCESSMAP.gif</a></p> <p><a href="http://image.slidesharecdn.com/12may1345deanblissstrackarev1-1324465696655-phpapp01-111221051739-phpapp01/95/lean-what-is-it-and-how-does-it-work-22-728.jpg?cb=1324445291">http://image.slidesharecdn.com/12may1345deanblissstrackarev1-1324465696655-phpapp01-111221051739-phpapp01/95/lean-what-is-it-and-how-does-it-work-22-728.jpg?cb=1324445291</a></p> <p>Students will then present</p>
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				the case for the disruptive technology to the hospital board using a presentation mechanism/methodology of their choice (Due in Module 6)
6	Critically evaluate the role of operations management in the strategic management of organisations and supply chains	<p>Explain the advantages of using an external standard such as ISO 9001 to assess an organisation over using internal goals and standards. Are there any drawbacks to using an external standard?</p> <p>Select a function within your organisation with which you are familiar (such as recruiting or purchasing) and draw up a brief audit plan for it.</p> <p>Assess your own organisation against the ABEF assessment matrix. How well does it perform? What areas for improvement should management focus on?</p> <p>Imagine your organisation in 2020. How much of the organisational knowledge is likely to be different from current knowledge? How would the new knowledge have been acquired?</p> <p>Compare your vision with those of some of</p>	<p>Gryna, F. (2001) 'Quality assurance; quality audit' <i>Quality Planning and Analysis: From product development through use</i>, 4th ed., McGraw Hill, New York: 659–683.</p> <p>Daniels, S.E. (2005) 'A recipe for excellence', <i>Quality Progress</i>, 38(6): 54–62</p> <p>Ghosn, C. (2002) 'Saving the business without losing the company', <i>Harvard Business Review</i>, January: 37–47.</p> <p>T. Thiagarajan, T. &amp; M. Zairi, M. (1997) 'A review of total quality management in practice: understanding the fundamentals through examples of best practice—Part 1' <i>The TQM Magazine</i>, (1997) 9(4): 270–286.</p>	<p>From a list of three samples, students will review a service process map of healthcare. Students will discuss how disruptive technologies could alter the process map.</p> <p><a href="http://www.gov.scot/Publications/2006/03/01111407/5">http://www.gov.scot/Publications/2006/03/01111407/5</a></p> <p><a href="https://www.lifenetems.org/wp-content/uploads/2015/03/LDTPROCESSMAP.gif">https://www.lifenetems.org/wp-content/uploads/2015/03/LDTPROCESSMAP.gif</a></p> <p><a href="http://image.slidesharecdn.com/12may1345deanblisstrackarev1-1324465696655-phpapp01-111221051739-phpapp01/95/lean-what-">http://image.slidesharecdn.com/12may1345deanblisstrackarev1-1324465696655-phpapp01-111221051739-phpapp01/95/lean-what-</a></p>



		your colleagues. What insights can you gain from this exercise?		<a href="https://www.laureate.edu/~/media/Files/2022/02/22/2022-02-22-1324445291.jpg">is-it-and-how-does-it-work-22-728.jpg?cb=1324445291</a>  Students will then present the case for the disruptive technology to the hospital board using a presentation mechanism/methodology of their choice (Due in Module 6)
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