

# Designing your course in Operations Management

The materials below have been created to help you plan your course in operations management.

## Services and manufacturing

This text is designed to provide a balance between services and manufacturing that reflects the most current trends in teaching (70% services and 30% manufacturing). However, Essential Operations Management can be written so that it can be used flexibly for teaching courses that are weighted more towards one sector or the other.

## Length of modules

Operations management is a broad subject, which is best accommodated in a full module, typically carrying 10-15 credits. This would entail approximately between 24 and 36 hours of class contact time over a single semester. A typical approach is to divide the total into 2 one-hour lectures (or one 2-hour lecture) with the remaining hours allocated to seminars, tutorials or workshops. In the case of a typical semester, the 12 lectures would correspond to the 12 chapters in the book and could be delivered weekly, with the addition of a one-hour seminar in each week. However, in practice, the semester might contain only 10 teaching weeks, to allow for an assessment period at the end.

The outlines presented below offer a range of options for either single or double semester courses. In designing module outlines, the differing needs of each course have been taken into account, and relevant cases have been selected to accompany each week. There are other factors which module leaders will take into account. For example, differing cohorts of students have their own distinctive needs, and the module outline needs to allow for some flexibility in content and delivery.

## Operations management – 12 week course

- **One semester duration:** 12 teaching weeks, including a reading week and examination week
- **Class contact:** 30 hours
- **Lectures:** 2hrs per week x 10 weeks = 20 hours
- **Seminars:** 1hr per week x 10 weeks = 10 hours
- **Examination:** 2 hours
- **Services/Manufacturing split:** 70% services, 30% manufacturing

Week	Topics	Relevant chapter(s)	Relevant case studies for lectures and seminars/tutorials
1	Introduction/ Managing Operations	1	<u>Lecture:</u> 1.1 Operations tasks in differing organizations ( <b>retail, restaurant, garment manufacturer</b> ) 1.2 Operations management tasks at <b>Portioli's sandwich and coffee bar</b> 1.3 Operations – a key role in the retail chain ( <b>supermarkets and large retail chains</b> )
			<u>Tutorial/seminar:</u> 1.4 A <b>cup of coffee</b> – service or product? End of chapter case Too Short The Day ( <b>theatre</b> )
2	Operations Strategy	2	<u>Lecture:</u> 2.1 Market positioning of <b>bottled water</b> 2.2 Customer segmentation in the <b>electricity industry</b> 2.3 Integrating marketing and operations at <b>Aldi</b> 2.4 Operations developments at <b>Benetton</b>
			<u>Tutorial/seminar:</u> End of chapter case <b>Apple</b>

3	Designing Services and Products Delivering services	3 and 4	<p><u>Lecture:</u></p> <p>3.1 Services and products at <b>Asahi Breweries</b></p> <p>3.2 Product research and development at <b>Microsoft</b></p> <p>3.3 Design and development at <b>GlaxoSmithKline</b></p> <p>3.4 Modular design at <b>Sonoco</b></p> <p>3.5 Capitalising through volume at <b>Assa Abloy</b></p> <p>3.6 Increasing the freshness of bread in <b>supermarket bakeries</b></p> <p>4.1 <b>Tipping</b> as a measurement of customer service</p> <p>4.2 Improving service delivery through use of the front and back office (<b>Royal Bank of Canada</b>)</p> <p>4.3 Service delivery at the <b>Moscow Scientific Institute for Eye Microsurgery</b>)</p> <p>4.4 Service delivery at a <b>local high street bank branch</b></p> <p>4.5 Providing personal service online at <b>Garden Escape</b></p> <p>4.4 Self-scanning in <b>supermarkets</b></p> <hr/> <p><u>Tutorial/seminar:</u></p> <p>End of chapter case <b>Dyson</b> <i>or</i></p> <p>End of chapter case <b>British Airways</b></p>
4	Making Products and Location and Layout	5 and 6	<p><u>Lecture:</u></p> <p>5.1 Old and new car plants (<b>Volkswagon, Toyota, Ford</b>)</p> <p>6.1 Growth at <b>Software Technology Parks, India</b></p> <p>6.2 Growth at <b>Plastic Omnium</b></p> <p>6.3 <b>HSBC</b> relocates call centre operations</p> <p>6.4 Creating space on <b>passenger jets</b></p> <p>6.5 Functions at a <b>telecommunications company</b> call centre</p> <hr/> <p><u>Tutorial/seminar:</u></p> <p>End of chapter case <b>Pret A Manger</b> <i>or</i></p> <p>End of chapter case <b>McDonald's</b> and <b>McCafe</b></p>
5	Managing capacity	7	<p><u>Lecture:</u></p> <p>Worked example – John Michael (<b>hairdressers</b>)</p> <p>Worked example – <b>Conform (manufacturing)</b></p> <p>7.1 Increasing <b>restaurant</b> capacity</p> <p>7.2 <b>Wal-mart</b> uses scale to compete in the US food market</p> <p>7.3 Flexible working at <b>BMW</b></p> <hr/> <p><u>Seminar/tutorial:</u></p> <p>End of chapter case <b>Tile Products</b></p>
6	Reading week		

7	Scheduling operations	8	<u>Lecture:</u> 8.1 IT system changes at <b>Dell</b> 8.2 JIT system developments at <b>Nissan</b>
			<u>Seminar/tutorial:</u> End of chapter case <b>Ash Electrics</b>
8	Managing inventory	9	<u>Lecture:</u> 9.1 Approaches to <b>managing inventory</b> 9.2 Using <b>causal analysis</b> to reduce inventory levels
			<u>Seminar/tutorial:</u> End of chapter case <b>Dell</b>
9	Managing quality	10	<u>Lecture:</u> 10.1 <b>Anstruther Fish Bar</b> 10.2 Changing the quality offering ( <b>Hampton Inns</b> and <b>UPS</b> ) 10.3 Regaining consumer confidence at <b>Coca-Cola</b> and <b>Perrier</b> 10.4 On-time <b>passenger flights</b> : Improving quality Case 10.5 <b>Nashua</b> : Having the right tools to do the job Case 10.5 <b>General Electric</b> : Six-sigma quality goal Case 10.6 <b>3M</b> : Committing to quality improvement
			<u>Seminar/tutorial:</u> End of chapter case <b>Crown Hotel</b>
10	Managing the supply chain	11	<u>Lecture:</u> 11.1 <b>Capital One</b> and <b>Delta</b> : strategic outsourcing decisions 11.2 <b>Fender International</b> : creating a positive retail experience 11.3 <b>Land Rover</b> : single sourcing policy 11.4 <b>Chiquita</b> : relocates from Cincinnati to Costa Rica 11.5 <b>Apple's iTunes</b> : digital supply chain 11.6 <b>Reinhold Messner</b> : the direct alpine approach to mountain climbing 11.7 Japanese companies' approach to supplier ( <b>Canon, Toyota, Nintendo</b> ) 11.8 IT developments at <b>Caterpillar</b> and <b>Gap</b> 11.9 <b>Dell</b> : supply chain integration 11.10 <b>Calyx</b> and <b>Corolla</b> : synchronising the supply chain

			<u>Seminar/tutorial:</u> End of chapter case <b>Zara</b>
11	Improving operations	12	<u>Lecture:</u> 12.1 Improving processes: <b>Steinways Pianos</b> and <b>Massachusetts General Hospital</b> 12.2 Breakthrough vs incremental improvement: gold mining <b>and Metro</b> 12.3 <b>Porsche:</b> Continuously improving operations 12.4 Continuously driving improvement: <b>Volvo and Ricoh</b> <b>12.5 Ford Motors:</b> Benchmarking against <b>Mazda</b> Case 12.6 <b>IDEO:</b> Rules for brainstorming improvement ideas Case 12.7 <b>Mutual Benefit Life</b> and <b>Jet Blue Airways.</b> Case 12.8 Closed vs open innovation: <b>Apple vs Google</b> Case 12.9 <b>Unipart</b> Case 12.10 <b>Apple's iPod:</b> Using suppliers to reduce lead-times Case 12.11 Using suppliers to develop new products and services: <b>TED</b> and <b>Apple's App Store</b> Case 12.12 Using customers to improve operations: <b>Wikipedia</b> and <b>Threadless</b>
			<u>Seminar/tutorial:</u> End of chapter case <b>Harley-Davidson</b>
12	Examination		

## Operations management –15 week course

- **One semester duration:** 15 teaching weeks, including a reading week and examination week
- **Class contact:** 39 hours
- **Lectures:** 2hrs per week x 13 weeks = 26 hours
- **Seminars:** 1 per week x 13 weeks = 13 hours
- **Examination:** 2 hours
- **Services/Manufacturing split:** 70% services, 30% manufacturing

Week	Topics	Relevant chapter(s)	Relevant case studies for lectures and seminars/tutorials
1	Introduction Managing Operations	1	<u>Lecture:</u> 1.1 Operations tasks in differing organizations ( <b>retail, restaurant, garment manufacturer</b> ) 1.2 Operations management tasks at <b>Portioli's sandwich and coffee bar</b> 1.3 Operations – a key role in the retail chain ( <b>supermarkets and large retail chains</b> )
			<u>Tutorial/seminar:</u> 1.4 A <b>cup of coffee</b> – service or product? End of chapter case Too Short The Day (theatre)
2	Operations Strategy	2	<u>Lecture:</u> 2.1 Market positioning of <b>bottled water</b> 2.2 Customer segmentation in the <b>electricity industry</b>
			2.3 Integrating marketing and operations at <b>Aldi</b>
3	Operations Strategy 2		2.4 Operations developments at <b>Benetton</b>
			<u>Tutorial/seminar:</u> End of chapter case <b>Apple</b>

4	Designing Services and Products	3	<u>Lecture:</u> 3.1 Services and products at <b>Asahi Breweries</b> 3.2 Product research and development at <b>Microsoft</b> 3.3 Design and development at <b>GlaxoSmithKline</b> 3.4 Modular design at <b>Sonoco</b> 3.5 Capitalising through volume at <b>Assa Abloy</b> 3.6 Increasing the freshness of bread in <b>supermarket bakeries</b>
			<u>Tutorial/seminar:</u> End of chapter case <b>Dyson</b>
5	Delivering services	4	<u>Lecture:</u> 4.1 <b>Tippling</b> as a measurement of customer service 4.2 Improving service delivery through use of the front and back office ( <b>Royal Bank of Canada</b> ) 4.3 Service delivery and eye microsurgery ( <b>Moscow Scientific Institute for Eye Microsurgery</b> ) 4.4 Service delivery at a local <b>high street bank branch</b> 4.5 Providing personal service online at <b>Garden Escape</b> 4.4 Self-scanning in <b>supermarkets</b>
			<u>Tutorial/seminar:</u> End of chapter case <b>British Airways</b>
6	Making Products	5	<u>Lecture:</u> 5.1 Old and new car plants ( <b>Volkswagon, Toyota, Ford</b> )
			<u>Tutorial/seminar:</u> End of chapter case <b>Pret A Manger</b>
7	Location and Layout	6	6.1 Growth of software at <b>Technology Parks</b> , India 6.2 Growth at <b>Plastic Omnium</b> 6.3 <b>HSBC</b> relocates call centre operations 6.4 Creating space on <b>passenger jets</b> 6.5 Functions at a <b>telecommunications company</b> call centre
			End of chapter case <b>McDonald's</b> and <b>McCafe</b>
8	Reading week		

9	Managing capacity	7	<u>Lecture:</u> Worked example – John Michael ( <b>hairdressers</b> ) Worked example - <b>Conform</b> 7.1 Increasing <b>restaurant</b> capacity 7.2 <b>Wal-mart</b> uses scale to compete in the US food market 7.3 Flexible working at <b>BMW</b>
			<u>Seminar/tutorial:</u> End of chapter case <b>Tile Products</b>
10	Scheduling operations	8	<u>Lecture:</u> 8.1 IT system changes at <b>Dell</b> 8.2 JIT system developments at <b>Nissan</b>
			<u>Seminar/tutorial:</u> End of chapter case <b>Ash Electrics</b>
11	Managing inventory	9	<u>Lecture:</u> 9.1 Approaches to <b>managing inventory</b> 9.2 Using <b>causal analysis</b> to reduce inventory levels
			<u>Seminar/tutorial:</u> End of chapter case <b>Dell</b>
12	Managing quality	10	<u>Lecture:</u> 10.1 <b>Anstruther Fish Bar</b> 10.2 Changing the quality offering ( <b>Hampton Inns</b> and <b>UPS</b> ) 10.3 Regaining consumer confidence at <b>Coca-Cola</b> and <b>Perrier</b> 10.4 On-time <b>passenger flights</b> : Improving quality Case 10.5 <b>Nashua</b> : Having the right tools to do the job Case 10.5 <b>General Electric</b> : Six-sigma quality goal Case 10.6 <b>3M</b> : Committing to quality improvement
			<u>Seminar/tutorial:</u> End of chapter case <b>Crown Hotel</b>



13	Managing the supply chain	11	<u>Lecture:</u> 11.1 <b>Capital One</b> and <b>Delta</b> : strategic outsourcing decisions 11.2 <b>Fender International</b> : creating a positive retail experience 11.3 <b>Land Rover</b> : single sourcing policy 11.4 <b>Chiquita</b> : relocates from Cincinnati to Costa Rica 11.5 Apple's <b>iTunes</b> : digital supply chain 11.6 Reinhold Messner: the direct alpine approach to <b>mountain climbing</b> 11.7 Japanese companies' approach to supplier ( <b>Canon, Toyota, Nintendo</b> ) 11.8 IT developments at <b>Caterpillar</b> and <b>Gap</b> 11.9 <b>Dell</b> : supply chain integration 11.10 <b>Calyx</b> and <b>Corolla</b> : synchronising the supply chain
			<u>Seminar/tutorial:</u> End of chapter case <b>Zara</b>

14	Improving operations	12	<p><u>Lecture:</u></p> <p>12.1 Improving processes: <b>Steinways Pianos</b> and <b>Massachusetts General Hospital</b></p> <p>12.2 Breakthrough vs incremental improvement: gold mining and <b>Metro</b></p> <p>12.3 <b>Porsche:</b> Continuously improving operations</p> <p>12.4 Continuously driving improvement: <b>Volvo and Ricoh</b></p> <p><b>12.5 Ford</b> Motors: Benchmarking against <b>Mazda</b></p> <p>Case 12.6 <b>IDEO:</b> Rules for brainstorming improvement ideas</p> <p>Case 12.7 <b>Mutual Benefit Life</b> and <b>Jet Blue Airways.</b></p> <p>Case 12.8 Closed vs open innovation: <b>Apple vs Google</b></p> <p>Case 12.9 <b>Unipart</b></p> <p>Case 12.10 <b>Apple's iPod:</b> Using suppliers to reduce lead-times</p> <p>Case 12.11 Using suppliers to develop new products and services: <b>TED</b> and <b>Apple's App Store</b></p> <p>Case 12.12 Using customers to improve operations: <b>Wikipedia</b> and <b>Threadless</b></p>
15	Round up and/or Examination		<p><u>Seminar/tutorial:</u></p> <p>End of chapter case <b>Harley-Davidson</b></p>

## Operations management – 2 semester course

- **Two semester duration:** 24 teaching weeks, including two reading weeks and two examination/assignment weeks
- **Class contact:** 60 hours
- **Lectures:** 2hrs per week x 20 weeks = 40 hours
- **Seminars:** 1hr per week x 20 weeks = 20 hours
- **Examination:** Multiple choice test (1<sup>st</sup> semester), assignment (1<sup>st</sup> semester) and final examination (2 hours)
- **Services/Manufacturing split:** 70% services, 30% manufacturing

Week	Topics	Relevant chapter(s)	Relevant case studies for lectures and seminar/tutorials
1 <sup>st</sup> semester			
1	Introduction	1	<u>Lecture:</u> 1.1 Operations tasks in differing organizations ( <b>retail, restaurant, garment manufacturer</b> )
			<u>Seminar/tutorial:</u> 1.2 Operations management tasks at <b>Portioli's sandwich and coffee bar</b> Overview of Operations Management through <b>Essential Operations Management</b>
2	The nature of managing operations	1	<u>Lecture:</u> 1.3 Operations – a key role in the retail chain ( <b>supermarkets and large retail chains</b> )
			<u>Seminar/tutorial:</u> 1.4 <b>A cup of coffee</b> – service or product? End of chapter case <b>Too Short The Day</b> (theatre)
3	An introduction to operations strategy	2	<u>Lecture:</u> 2.1 Market positioning of <b>bottled water</b> 2.2 Customer segmentation in the <b>electricity industry</b>
			<u>Seminar/tutorial:</u> 2.3 Integrating marketing and operations at <b>Aldi</b>
4	Operations strategy – developing and implementing a strategy	2	<u>Lecture:</u> 2.4 Operations developments at <b>Benetton</b> and discussion of <b>Figure 2.13</b>
			<u>Seminar/tutorial:</u> End of chapter case <b>Apple</b>
5	Designing Services and Products	3	<u>Lecture:</u> 3.1 Services and products at <b>Asahi Breweries</b> 3.2 Product research and development at <b>Microsoft</b> 3.3 Design and development at <b>GlaxoSmithKline</b>

			<p>3.4 Modular design at <b>Sonoco</b></p> <p>3.5 Capitalising through volume at <b>Assa Abloy</b></p> <p>3.6 Increasing the freshness of bread in <b>supermarket bakeries</b></p> <p><u>Seminar/tutorial:</u> End of chapter case <b>Dyson</b></p>
6	Reading week		
7	Delivering services	4	<p><u>Lecture:</u></p> <p>4.1 Tipping as a measurement of customer service</p> <p>4.2 Improving service delivery through use of the front and back office (<b>Royal Bank of Canada</b>)</p> <p>4.3 Service delivery and eye microsurgery (<b>Moscow Scientific Institute for Eye Microsurgery</b>)</p> <p>4.4 Service delivery at a local <b>high street bank branch</b></p> <p>4.5 Providing personal service online at <b>Garden Escape</b></p> <p>4.4 Self-scanning in <b>supermarkets</b></p> <p><u>Seminar/tutorial:</u> End of chapter case <b>British Airways</b></p>
8	Making Products	5	<p><u>Lecture:</u></p> <p>5.1 Old and new car plants (<b>Volkswagon, Toyota, Ford</b>)</p> <p><u>Seminar/tutorial:</u> End of chapter case <b>Pret A Manger</b></p>
9	Location and layout	6	<p><u>Lecture:</u></p> <p>6.1 Growth of software at <b>Technology Parks</b>, India</p> <p>6.2 Growth at <b>Plastic Omnium</b></p> <p>6.3 <b>HSBC</b> relocates call centre operations</p> <p>6.4 Creating space on <b>passenger jets</b></p> <p>6.5 Functions at a telecommunications company call centre</p> <p><u>Seminar/tutorial:</u> End of chapter case <b>McDonald's</b> and <b>McCafe</b></p>
10	Managing capacity	7	<p><u>Lecture:</u></p> <p>7.1 Increasing <b>restaurant</b> capacity</p> <p>7.2 <b>Wal-mart</b> uses scale to compete in the US food market</p> <p><u>Seminar/tutorial:</u> Worked example – <b>John Michael</b> (hairdressers) Worked example – <b>Conform</b> (manufacturing)</p>
11	Managing capacity 2	7	<p><u>Lecture:</u></p> <p>7.3 Flexible working at <b>BMW</b></p> <p><u>Seminar/tutorial:</u> End of chapter case <b>Tile Products</b></p>

12	Debrief / multiple choice test and/or assignment setting		
2 <sup>nd</sup> Semester			
13	Examination		
14	Scheduling operations	8	<u>Lecture:</u> 8.1 IT system changes at <b>Dell</b> 8.2 JIT developments at <b>Nissan</b>
			<u>Seminar/tutorial:</u> End of chapter case <b>Ash Electrics</b>
15	Managing inventory		<u>Lecture:</u>
			<u>Seminar/tutorial:</u> 9.1 Approaches to <b>managing inventory</b>
16	Managing inventory 2	9	<u>Lecture:</u> 9.2 Using <b>causal analysis</b> to reduce inventory levels
			<u>Seminar/tutorial:</u> End of chapter case <b>Dell</b>
17	Managing quality	10	<u>Lecture:</u> 10.1 <b>Anstruther Fish Bar</b> 10.3 Regaining consumer confidence at <b>Coca-Cola</b> and <b>Perrier</b>
			<u>Seminar/tutorial:</u> 10.2 Changing the quality offering ( <b>Hampton Inns</b> and <b>UPS</b> )
18	Managing quality 2		<u>Lecture:</u> 10.4 On-time passenger flights: Improving quality 10.5 <b>Nashua</b> : Having the right tools to do the job 10.5 <b>General Electric</b> : Six-sigma quality goal 10.6 <b>3M</b> : Committing to quality improvement
			<u>Seminar/tutorial:</u> End of chapter case <b>Crown Hotel</b>
19	Reading week		

20	Managing the supply chain	11	<p><u>Lecture:</u></p> <p>11.1 <b>Capital One</b> and <b>Delta</b>: strategic outsourcing decisions</p> <p>11.2 <b>Fender International</b>: creating a positive retail experience</p> <p>11.3 <b>Land Rover</b>: single sourcing policy</p> <p>11.4 <b>Chiquita</b>: relocates from Cincinnati to Costa Rica</p> <p>11.5 Apple's <b>iTunes</b>: digital supply chain</p> <p>11.6 Reinhold Messner: the direct alpine approach to <b>mountain climbing</b></p> <p>11.7 Japanese companies' approach to supplier (<b>Canon, Toyota, Nintendo</b>)</p> <p>11.8 IT developments at <b>Caterpillar</b> and <b>Gap</b></p> <p>11.9 <b>Dell</b>: supply chain integration</p> <p>11.10 <b>Calyx</b> and <b>Corolla</b>: synchronising the supply chain</p> <p><u>Seminar/tutorial:</u></p> <p>End of chapter case <b>Zara</b></p>
21	Improving operations	12	<p><u>Lecture:</u></p> <p>12.1 Improving processes: <b>Steinways Pianos</b> and <b>Massachusetts General Hospital</b></p> <p>12.2 Breakthrough vs incremental improvement: gold mining and <b>Metro</b></p> <p>12.3 <b>Porsche</b>: Continuously improving operations</p> <p>12.4 Continuously driving improvement: <b>Volvo and Ricoh</b></p> <p><b>12.5 Ford Motors</b>: Benchmarking against <b>Mazda</b></p> <p><u>Seminar/tutorial:</u></p> <p>Case 12.8 Closed vs open innovation: <b>Apple vs Google</b></p> <p>Case 12.11 Using suppliers to develop new products and services: <b>TED</b> and <b>Apple's App Store</b></p> <p>Case 12.12 Using customers to improve operations: <b>Wikipedia</b> and <b>Threadless</b></p>
22	Improving operations 2		<p>Case 12.6 <b>IDEO</b>: Rules for brainstorming improvement ideas</p> <p>Case 12.7 <b>Mutual Benefit Life</b> and <b>Jet Blue Airways</b>.</p> <p>Case 12.9 <b>Unipart</b></p> <p>Case 12.10 <b>Apple's iPod</b>: Using suppliers to reduce lead-times</p> <p>End of chapter case <b>Harley-Davidson</b></p>
23	Summary and exam briefing/revision		
24	Final examination		

## Services operations management – single semester module

- **One semester duration:** 12 teaching weeks including reading week and exam week
- **Class contact:** 36 hours
- **Lectures:** 2 per week x 12 weeks = 24 hours
- **Seminars:** 1 per week x 12 weeks = 12 hours
- **Examination:** 2 hours
- **Services/Manufacturing split:** 100% services

Week	Topics	Relevant chapter(s)	Relevant case studies for lectures and seminar/tutorials
1	Introduction; Managing Service Operations	1	<p><u>Lecture:</u></p> <p>1.1 Operations tasks in differing organizations (<b>retail, restaurant, garment manufacturer</b>)</p> <p>1.2 Operations management tasks at <b>Portioli's sandwich and coffee bar</b></p> <p>1.3 Operations – a key role in the retail chain (<b>supermarkets and large retail chains</b>)</p> <hr/> <p><u>Tutorial/seminar:</u></p> <p>1.4 A <b>cup of coffee</b> – service or product?</p> <p>End of chapter case Too Short The Day (<b>theatre</b>)</p>
2	Service strategy	1	<p><u>Lecture:</u></p> <p>2.2 Customer segmentation in the <b>electricity industry</b></p> <p>2.3 Integrating marketing and operations at <b>Aldi</b></p> <hr/> <p><u>Tutorial/seminar:</u></p> <p>End of chapter case <b>Apple</b></p>
3	Designing and delivering Services	3 and 4	<p><u>Lecture:</u></p> <p>3.1 Services and products at <b>Asahi Breweries</b></p> <p>4.1 <b>Tipping</b> as a measurement of customer service</p> <p>4.2 Improving service delivery through use of the front and back office (<b>Royal Bank of Canada</b>)</p> <p>4.3 Service delivery and eye microsurgery (<b>Moscow Scientific Institute for Eye Microsurgery</b>)</p> <p>4.4 Service delivery at a local <b>high street bank branch</b></p> <p>4.5 Providing personal service online at <b>Garden Escape</b></p> <p>4.4 Self-scanning in <b>supermarkets</b></p> <hr/> <p><u>Tutorial/seminar:</u></p> <p>End of chapter case <b>British Airways</b></p>
4	Location and Layout	6	<p><u>Lecture:</u></p>

			<p>6.1 Growth of software at <b>Technology Parks</b>, India</p> <p>6.3 <b>HSBC</b> relocates call centre operations</p> <p>6.4 Creating space on <b>passenger jets</b></p> <p>6.5 Functions at a <b>telecommunications company</b> call centre</p> <p><u>Tutorial/seminar:</u></p> <p>End of chapter case <b>Pret A Manger</b> <i>or</i></p> <p>End of chapter case <b>McDonald's</b> and <b>McCafe</b></p>
5	Managing capacity	7	<p><u>Lecture:</u></p> <p>7.1 Increasing <b>restaurant</b> capacity</p> <p>7.2 <b>Wal-mart</b> uses scale to compete in the US food market</p> <p><u>Seminar/tutorial:</u></p> <p>End of chapter case <b>Tile Products</b> <i>or</i></p> <p>Worked example – <b>John Michael</b> (hairdressers)</p>
6	Reading week		
7	Scheduling operations	8	<p><u>Lecture:</u></p> <p>8.1 IT system changes at <b>Dell</b></p> <p><u>Seminar/tutorial:</u></p> <p>End of chapter case <b>Ash Electrics</b></p>
8	Managing inventory	9	<p><u>Lecture:</u></p> <p>Review <b>Figure 9.3</b> Process stage, types of inventory and examples</p> <p>9.1 Approaches to <b>managing inventory</b></p> <p>9.2 Using <b>causal analysis</b> to reduce inventory levels</p> <p><u>Seminar/tutorial:</u></p> <p>End of chapter case <b>Dell</b></p>
9	Managing quality and performance	10	<p><u>Lecture:</u></p> <p>10.1 <b>Anstruther Fish Bar</b></p> <p>10.4 On-time <b>passenger flights</b>: Improving quality</p> <p>10.5 <b>Nashua</b>: Having the right tools to do the job</p> <p><u>Seminar/tutorial:</u></p> <p>End of chapter case <b>Crown Hotel</b></p>
10	Managing the supply chain	11	<p>11.1 <b>Capital One</b> and <b>Delta</b>: strategic outsourcing decisions</p> <p>11.2 <b>Fender International</b>: creating a positive retail experience</p> <p>11.4 <b>Chiquita</b>: relocates from Cincinnati to Costa Rica</p> <p>11.5 Apple's <b>iTunes</b>: digital supply chain</p> <p>11.6 Reinhold Messner: the direct alpine approach to <b>mountain climbing</b></p> <p>11.10 <b>Calyx</b> and <b>Corolla</b>: synchronising the supply chain</p>



			<u>Seminar/tutorial:</u> End of chapter case <b>Zara</b>
11	Improving operations	12	<u>Lecture:</u> 12.1 Improving processes: <b>Steinways Pianos</b> and <b>Massachusetts General Hospital</b> 12.2 Breakthrough vs incremental improvement: <b>gold mining and Metro</b> Case 12.6 <b>IDEO</b> : Rules for brainstorming improvement ideas Case 12.7 <b>Mutual Benefit Life</b> and <b>Jet Blue Airways.</b> Case 12.9 <b>Unipart</b>
			<u>Seminar/tutorial:</u> Case 12.8 Closed vs open innovation: <b>Apple vs Google</b> Case 12.11 Using suppliers to develop new products and services: <b>TED</b> and <b>Apple's App Store</b> Case 12.12 Using customers to improve operations: <b>Wikipedia</b> and <b>Threadless</b>
12	Examination week		

## Manufacturing operations management – single semester module

- **One semester duration:** 12 teaching weeks
- **Class contact:** 36 hours
- **Lectures:** 2 per week x 12 weeks = 24 hours
- **Seminars:** 1 per week x 12 weeks = 12 hours
- **Examination:** 2 hours
- **Services/Manufacturing split:** 100% manufacturing

Week	Topics	Relevant chapter(s)	Relevant case studies for lectures and seminar/tutorials
1	Introduction/ Managing Operations	1	<u>Lecture:</u> 1.1 Operations tasks in differing organizations ( <b>retail, restaurant, garment manufacturer</b> )
			<u>Tutorial/seminar:</u> 1.4 A <b>cup of coffee</b> – service or product? 1.2 Operations management tasks at <b>Portioli's sandwich and coffee bar</b>
2	Operations Strategy	2	<u>Lecture:</u> 2.1 Market positioning of <b>bottled water</b> 2.4 Operations developments at <b>Benetton</b>
			<u>Tutorial/seminar:</u> End of chapter case <b>Apple</b>
3	Designing Products	3	<u>Lecture:</u> 3.1 Services and products at <b>Asahi Breweries</b> 3.2 Product research and development at <b>Microsoft</b> 3.3 Design and development at <b>GlaxoSmithKline</b> 3.4 Modular design at <b>Sonoco</b> 3.5 Capitalising through volume at <b>Assa Abloy</b> 3.6 Increasing the freshness of bread in <b>supermarket bakeries</b>
			<u>Tutorial/seminar:</u> End of chapter case <b>Dyson</b>
4	Making Products and Location and Layout	5 and 6	<u>Lecture:</u> 5.1 Old and new car plants ( <b>Volkswagon, Toyota, Ford</b> ) 6.1 Growth of software at <b>Technology Parks, India</b> 6.2 Growth at <b>Plastic Omnium</b>
			<u>Tutorial/seminar:</u>

			End of chapter case <b>Pret A Manger</b> or End of chapter case <b>McDonald's</b> and <b>McCafe</b>
5	Managing capacity	7	<u>Lecture:</u> Worked example – Conform ( <b>manufacturing</b> ) 7.2 <b>Wal-mart</b> uses scale to compete in the US food market 7.3 Flexible working at <b>BMW</b>
			<u>Seminar/tutorial:</u> End of chapter case <b>Tile Products</b>
6	Reading week		
7	Scheduling operations	8	<u>Lecture:</u> 8.1 IT system changes at <b>Dell</b> 8.2 JIT system developments at <b>Nissan</b>
			<u>Seminar/tutorial:</u> End of chapter case <b>Ash Electrics</b>
8	Managing inventory	9	<u>Lecture:</u> 9.1 Approaches to <b>managing inventory</b> 9.2 Using <b>causal analysis</b> to reduce inventory levels
			<u>Seminar/tutorial:</u> End of chapter case <b>Dell</b>
9	Managing quality	10	<u>Lecture:</u> 10.1 <b>Anstruther Fish Bar</b> 10.3 Regaining consumer confidence at <b>Coca-Cola</b> and <b>Perrier</b>
			<u>Seminar/tutorial:</u> Case 10.5 <b>Nashua</b> : Having the right tools to do the job Case 10.5 <b>General Electric</b> : Six-sigma quality goal Case 10.6 <b>3M</b> : Committing to quality improvement
10	Managing the supply chain	11	<u>Lecture:</u> 11.2 <b>Fender International</b> : creating a positive retail experience 11.3 <b>Land Rover</b> : single sourcing policy 11.4 <b>Chiquita</b> : relocates from Cincinnati to Costa Rica 11.5 Apple's <b>iTunes</b> : digital supply chain 11.6 Reinhold Messner: the direct alpine approach to <b>mountain climbing</b> 11.7 Japanese companies' approach to supplier ( <b>Canon, Toyota, Nintendo</b> ) 11.8 IT developments at <b>Caterpillar</b> and <b>Gap</b> 11.9 <b>Dell</b> : supply chain integration 11.10 <b>Calyx</b> and <b>Corolla</b> : synchronising the supply chain

			<u>Seminar/tutorial:</u> End of chapter case <b>Zara</b>
11	Improving operations	12	<u>Lecture:</u> 12.1 Improving processes: <b>Steinways Pianos</b> and <b>Massachusetts General Hospital</b> 12.2 Breakthrough vs incremental improvement: gold mining <b>and Metro</b> 12.3 <b>Porsche:</b> Continuously improving operations 12.4 Continuously driving improvement: <b>Volvo and Ricoh</b> <b>12.5 Ford Motors:</b> Benchmarking against <b>Mazda</b> Case 12.6 <b>IDEO:</b> Rules for brainstorming improvement ideas Case 12.8 Closed vs open innovation: <b>Apple vs Google</b> Case 12.9 <b>Unipart</b> Case 12.10 <b>Apple's iPod:</b> Using suppliers to reduce lead-times Case 12.11 Using suppliers to develop new products and services: <b>TED</b> and <b>Apple's App Store</b> Case 12.12 Using customers to improve operations: <b>Wikipedia</b> and <b>Threadless</b>
			<u>Seminar/tutorial:</u> End of chapter case <b>Harley-Davidson</b>
12	Examination		