Supply Chain Management
GBAT9127

Course Overview
Semester 2 2014
Important Notice

The material contained in this study guide is in the nature of general comment only and is not advice on any particular matter. No one should act on the basis of anything contained in this guide without taking appropriate professional advice upon the particular circumstances. The Publisher, the Editors, and the Authors do not accept responsibility for the consequences of any action taken or omitted to be taken by any person, whether a subscriber to this guide or not, as a consequence of anything contained in or omitted from this guide.
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Semester 2 2014 course schedule

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<th>28 July</th>
<th>Unit 1</th>
<th>Introduction to supply chain management</th>
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<tr>
<td>Week 2</td>
<td>4 August</td>
<td>Unit 2</td>
<td>Supply chain design and alignment</td>
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<td>11 August</td>
<td>Unit 3</td>
<td>Supply chain drivers and performance metrics</td>
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<td>Week 4</td>
<td>18 August</td>
<td>Unit 4</td>
<td>Service supply chains</td>
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<td>Week 5</td>
<td>25 August</td>
<td>Unit 5</td>
<td>Planning demand and supply</td>
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<td>Week 6</td>
<td>1 September</td>
<td>Unit 6</td>
<td>Supply issues in supply chain management</td>
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<td>Week 7</td>
<td>8 September</td>
<td>Unit 7</td>
<td>Location, transport and logistics</td>
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<td>Week 8</td>
<td>15 September</td>
<td>Unit 8</td>
<td>Managing inventory in the supply chain</td>
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<tr>
<td>Week 9</td>
<td>22 September</td>
<td>Unit 9</td>
<td>Optimising supply chain inventory</td>
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<td></td>
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<td></td>
<td><strong>Mid-term recess: Friday 26 September – Tuesday 7 October</strong></td>
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<tr>
<td>Week 10</td>
<td>7 October*</td>
<td>Unit 10</td>
<td>Aligning the supply chain using contracts</td>
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<tr>
<td>Week 11</td>
<td>13 October</td>
<td>Unit 11</td>
<td>The importance of information in the supply chain</td>
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<td>Week 12</td>
<td>20 October</td>
<td>Unit 12</td>
<td>Managing the supply chain of the future</td>
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<td>Week 13</td>
<td>27 October</td>
<td>Examination week 1</td>
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<tr>
<td>Week 14</td>
<td>3 November</td>
<td>Examination week 2</td>
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*Monday 6 October is a public holiday in NSW
Course staff

Course Coordinator

Each course has a Course Coordinator who is responsible for the academic leadership and overall academic integrity of the course. The Course Coordinator selects content and sets assessment tasks, and takes responsibility for specific academic and administrative issues related to the course when it is being offered. Course Coordinators oversee Class Facilitators and ensure that the ongoing standard of facilitation in the course is consistent with the quality requirements of the program.

The Course Coordinator is:

Brad Smith  
MBA, BE (Mech) Hons  

b.smith@unsw.edu.au

Brad is a Sydney-based consultant and educator with extensive teaching experience in tertiary and professional environments, in online and face-to-face settings.

After a career in engineering and general management, Brad took the leap in 2001 to start and manage his own consulting business and now works with clients to help them identify and implement real improvements to efficiency and profitability. An avid life-long learner, Brad also enjoys his teaching roles and has worked with many universities to help people develop their full potential. The teaching role reinforces the practical consulting role and vice versa. He is an adjunct faculty member with several universities, including the UNSW ASB and teaches in the MBT Program and with the AGSM Fulltime and Executive MBA Programs. He facilitates many courses, including Supply Chain Management, Project Management, Statistical Analysis of Data and Modelling and Operations Management.
Class Facilitator

The role of your Class Facilitator is to support the learning process by encouraging interaction amongst participants, providing direction in understanding the course content, assessing participant progress through the course and providing feedback on work submitted. MBT Class Facilitators comprise both academics and industry practitioners with relevant backgrounds.

You will be notified of your Class Facilitator’s name and contact details in your class confirmation email sent by MBT Student Services. Details will also be available in the gallery section of your online class for both face-to-face and distance classes.

Course authors

Brad Smith

Brad Smith extensively revised and rewrote several sections of this course in 2012 to build on the work performed by the previous authors outlined below.

Dr Stefan Markowski, MSc (Economics) Warsaw; PhD (London)

Stefan is an Associate Professor at UNSW@ADFA, lecturing in economics and management. His academic interest includes defence economics and management, procurement, logistics and technology management, and foreign investment and trade, areas in which he has published extensively.

Acknowledgements

The former Course Coordinator, Jürgen Oschadleus, carried out an update to the course in 2008.

We wish to acknowledge the valuable contribution of A/Professor Roger Kerr, who acted as academic reviewer for the original development of this course. Roger was also the author of the MBT course GBAT9102 Management of Manufacturing Systems.
Course information

Aims

In this course, you will examine the basic concepts and tools of supply chain management within the broader framework of an organisation’s overall competitive strategy.

The supply chain, which comprises all aspects of the sourcing of inputs from upstream suppliers, the internal value-adding processes and the distribution of outputs to downstream customers, is central to the overall success of any organisation. Any organisation that does not align its overall corporate strategy and its supply chain strategy will struggle to successfully deliver products and services to the market in a form that customers value.

Structure

The course structure is best illustrated using the course overview diagram shown below:

![Course Overview Diagram](After Chopra and Meindl (2010))
After first reviewing the importance of aligning the supply chain strategy to the overall corporate strategy, the course then looks in detail at each of the important supply chain drivers. The role of all supply chains is to allow the organisation to implement its corporate strategy in the market place. Some organisations place the most importance on being responsive to customer needs. Others place more emphasis on being low-cost providers. Supply chain managers must balance these two competing priorities using the drivers available to them – sourcing, facilities, inventory, transportation pricing and information. How these drivers are coordinated to deliver the overall supply chain strategy will largely determine the success of the organisation.

Over 12 Units, the course looks at the following aspects of supply chains:

Unit 1, *Introduction to supply chain management*, provides an overview of how corporate strategy and supply chain strategy are integrated, and sets the scene for the discussion of operations and supply chain management in globalised business environment.

Unit 2, *Supply chain design and alignment*, introduces the concepts of supply chain efficiency and responsiveness, the supply chain drivers and how these impact on the efficiency–responsiveness continuum.

Unit 3, *Supply chain drivers and performance metrics*, looks in further detail at the supply chain drivers and how supply chain performance can be defined and measured.

Unit 4, *Service supply chains*, recognises that not only product-based companies must be concerned with supply chains. Service organisations also have supply chain issues to manage. Of particular importance to services is the matching of supply to demand (due to the inability to store inventory) and the management of the customer experience.

Unit 5, *Planning demand and supply*, considers forecasting techniques that can be used to estimate demand and methods that are then used to match this demand with a supply of products and services.

Unit 6, *Supply issues in supply chain management*, considers the decisions organisations must make concerning whether to make or buy production inputs, the most suitable sourcing policies, procurement strategies and the increasingly important issues of ethical and sustainable sourcing.

Unit 7, *Location, transport and logistics*, provides an overview of optimal location selection, transport modes, networks and operations in supply chains and the impact each of these will have on the overall supply chain strategy.

Unit 8, *Managing inventory in the supply chain*, considers the importance of inventory, and inventory management to the overall success of the supply chain strategy. We look at several models that can be used to minimise inventory costs, balance the costs associated with sourcing and holding inventory and meet defined customer-service levels.
Unit 9, *Optimising supply chain inventory*, looks at several techniques that supply chain managers can use to lower the costs associated with inventory while still providing the same level of customer service.

Unit 10, *Aligning the supply chain using contracts*, examines how important it is for organisations to align their supply chain actions with other organisations in the supply chain. By coordinating their actions, organisations can seek to maximise the overall value, and therefore profit, available for all parties to share. We look at the underlying theory and the contractual means that organisations can use to align individual supply chain actions.

Unit 11, *The importance of information in the supply chain*, provides an overview of supply chain information flows, IT infrastructure and computer-enabled network integration, including e-commerce, the internet and virtual supply chains.

Unit 12, *Managing the supply chain of the future*, looks forward to consider what aspects of the supply chain organisations must consider in the future.

**Learning outcomes**

When you have completed this course you should be able to:

- understand and analyse the challenges posed by the integration of business processes within and across firms and industries in the global economy
- define the key features of supply chains in manufacturing and service industries
- compare and evaluate different supply chain typologies and their application to tailor supply chain structures to different market conditions
- compare the workings of distribution channels and the provision of customer service by lean, agile, responsive and efficient suppliers
- evaluate and discuss the procurement of goods and services from upstream suppliers and advise on the associated source selection, contracting and supplier management issues
- analyse the cost effectiveness of using different transport modes and warehousing facilities in manufacturing and service industries
- compare a range of approaches to inventory management, and determine the associated costs of each and which is most appropriate for different product and market types
- appreciate the contractual methods available to help coordinate the actions of multiple parties across the supply chain
- understand the importance of computer-enabled integration of supply chains and the use of the internet as a means to reduce the ‘bullwhip effect’ and enhance the efficiency of business activities
• discuss the current state of supply chain management research, and the future trends impacting on the development of supply chains.

Skills and experience you will need

While it is not necessary for participants to be highly skilled in mathematics to undertake this course, you are expected to be familiar with, or be prepared to acquire, basic knowledge about the following concepts:

• basic probability and statistics
• probability distributions and standard deviations (particularly the normal distribution)
• means and weighted averages
• basic algebra.

You will be expected to be able to perform some basic algebraic and statistical calculations in this course.

Resources

Prescribed textbook

The prescribed textbook for this course is:

The course uses the following textbook. Readings and exercises from the textbook are integrated with the Unit notes and other readings provided.

ISBN: 9780273787075

Recommended reading

Books


**Journals**

*Harvard Business Review*

*Sloan Management Review*

*Supply Chain Management Review*

*The Journal of Supply Chain Management*

*The European Journal of Purchasing and Supply Management*

*International Journal of Purchasing and Materials Management*

*Logistics Management*

*International Journal of Logistics Management*

*International Journal of Physical Distribution and Logistics Management*

*Journal of Business Logistics*

*International Journal of Production Research*

**Websites**

APICS – [www.apics.org](http://www.apics.org) Association for Operations Management


SCC – [www.supply-chain.org](http://www.supply-chain.org) Supply Chain Council


ASQ – [www.asq.org](http://www.asq.org) American Society for Quality

**Relationship to other courses in the MBT program**

This course offers a broad examination of the key issues involved in the management of supply chains. It places supply chain management in a strategic context and requires a blend of managerial and technological knowledge and skills.

However, the course begins with a guided analysis of the strategic context of the organisation so can be taken early in your MBT program, before any other strategy courses have been completed.
This course is well suited to a broad range of students – not only those involved in manufacturing industries – as the concepts, processes, and methods are readily adaptable to organisations that provide hard or soft product/service combination industries. One full Unit is devoted to service supply chains. There are numerous other references and opportunities to apply the theory to service supply chains in both the Unit notes and the associated text.

The MBT course GBAT9102 *Management of Manufacturing Systems* looks in much more detail at the management of the supply chain within a manufacturing organisation. The aim of GBAT9102 and this course on supply chain management is to bring together related, but traditionally separate sub-disciplines, so that together the two courses form a complete course in operations management. Both GBAT9102 and GBAT9127 share the same textbook. Whilst there is some duplication between the two courses, it is minimal, with each course addressing different aspects of the operations management of an organisation.
Assessment

There are two assignments and an examination for GBAT9127 Supply Chain Management. Assignments must be received by 9.30am Sydney time on the due dates.

<table>
<thead>
<tr>
<th>Participation</th>
<th>Throughout the semester</th>
<th>15%</th>
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<tbody>
<tr>
<td>Assignment 1</td>
<td><strong>Wednesday 3 September 2014</strong> (Week 6)</td>
<td>20%</td>
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<tr>
<td>Assignment 2</td>
<td><strong>Wednesday 22 October 2014</strong> (Week 12)</td>
<td>30%</td>
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<tr>
<td>Examination*</td>
<td><strong>Monday 3 November 2014</strong> (10am if sitting on campus)</td>
<td>35%</td>
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</table>

*Examination is 2 hours; open book
Continual course improvement

MBT courses are revised each time they run, with updated course overviews and assessment tasks. All courses are reviewed and revised every two years and significant course updates are carried out in line with industry developments, and also when new editions of prescribed textbooks are published.

The MBT surveys students via the UNSW CATEI system each time a course is offered. The data collected provide anonymous feedback from students on the quality of course content and materials, class facilitation, student-support services and the MBT Program in general. This student feedback is taken into account in all course revisions.

The Australian School of Business (ASB) also monitors the quality of students’ learning experiences in all its programs. A random selection of completed assessment tasks may be used for quality-assurance purposes. This information will be aggregated and used:

- to determine the extent to which program learning goals are being achieved for accreditation purposes
- to improve the quality of ASB programs.

All material used will be treated as confidential and these processes will have no bearing on course grades.

Student evaluations from the last presentation of the course

There was a considerable improvement in the ratings of this course last time it was presented. This was driven by the following actions.

- The course was extensively rewritten to make it more current and relevant to today’s manufacturing environment.
- A new text was specified allowing students access to many exercises and examples for self-study, plus the opportunity to use the text’s associated online resources.
- Better alignment with the course GBAT9102 Management of Manufacturing Systems.

Coordinator’s response

The course was recently rewritten and last semester it was updated to reflect a new issue of the text. As a result, this semester the focus has been on bedding these changes down and fixing a small number of typographical errors.