ES3J2-15 Engineering Supply Chain Management

27/28

Department
School of Engineering
Level
Undergraduate Level 3
Module leader
Maria Triantafyllou
Credit value
15
Module duration
10 weeks
Assessment
100% coursework
Study location
University of Warwick main campus, Coventry

Description

Introductory description

ES3**-15 Engineering Supply Chain Management

Module web page

Module aims

Engineering organisations operate within part of a larger supply chain or network, whose combined processes deliver a product or service to the end customer. To increase competitive advantage businesses must not only seek to design and operate processes that add maximum value within their own entity but also strive to optimise these processes within the larger supply chain or network.
The module aims to give participants an understanding of the operation of the supply chain and the opportunities that tools such as e-commerce bring for the more effective integrated operation of the supply of both products and services.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

1 SCM concepts
2 Business strategy and SCM
3 SCM and Procurement strategies
4 Value and logistics costs
5 Globalisation
6 Outsourcing
7 Supplier selection
8 Lead time reduction
9 JIT, lean and agile
10 Integration
11 Relationships
12 Negotiation
13 Measurement & metrics
14 Application of technology in the supply chain
15 Physical Logistics
16 Improving & developing

Learning outcomes

By the end of the module, students should be able to:

- Identify and apply end-to-end supply chain strategies and principles to ensure alignment of supply chain activities with end customer requirements.. (M14, M15)
- Recognise and recommend supply chain techniques for entities within the global and domestic supply chain to select and maintain effective partnerships and supply chain relationships between tiers within the supply chain. (M9, M13)
- Identify and select suitable supply chain and operations management tools and techniques to manage and improve the performance of the supply chain.. (M13)
- Differentiate and understand how technical enablers and associated physical logistics techniques influence the delivery of end customer requirements. Articulate how these are met from a cost, quality and delivery perspective.(M5, M14)
- Understand the principles of sustainability and the factors contributing to an ethically and environmentally sustainable supply chain with an awareness of regulatory considerations. (M7(D), M8)
- Communicate knowledge and application of the above in appropriate verbal and written formats.

Indicative reading list

Reading lists can be found in Talis

Specific reading list for the module

Subject specific skills

1. Students should be able to demonstrate their ability to visualise, conceptualise and understand typical supply chain systems.
2. Student should be able to devise economically viable and ethically sound sustainable supply chain solutions
3. Students should be pragmatic, taking a logical and practical supply chain wide approach to understand the practical steps necessary for, often complex, supply chain concepts to become reality.
4. Students should demonstrate the ability to seek to achieve sustainable solutions to problems and have strategies for being creative and innovative
5. Students should have the ability to be risk, cost and value-conscious, and aware of their ethical, social, cultural, environmental, health and safety, and wider professional engineering responsibilities

Transferable skills

1. Apply problem solving skills, information retrieval, and the effective use of general IT facilities within the context of supply chain management.
2. Communicate (written and oral; to technical and non-technical audiences) and work with others within a supply chain context.
3. Plan self-learning and improve performance, as the foundation for lifelong learning/CPD
4. Exercise initiative and personal responsibility, including time management, which may be as a team member or leader
5. Demonstrate a growing awareness of the nature of supply chains, business and enterprise in the creation of economic and social value
6. Overcome difficulties by employing skills, knowledge and understanding in a flexible manner
7. Students should have the ability to understand, formulate and operate within appropriate codes of conduct, when faced with an ethical issue
   8)Students should demonstrate and appreciation of the global dimensions of supply chain management, engineering, commerce and communication
8. Students should be professional in their outlook, be capable of team working, be effective communicators, and be able to exercise responsibility and sound management approaches.

Study

Study time

Type	Required
Lectures	20 sessions of 1 hour (7%)
Private study	130 hours (46%)
Assessment	130 hours (46%)
Total	280 hours

Private study description

Guided independent learning 130 hours

Costs

No further costs have been identified for this module.

Assessment

You must pass all assessment components to pass the module.

Assessment group A

Assessment component	Weighting	Study time	Eligible for self-certification
Demonstration of understanding of benefits of managing and developing the SC in an engineering sector	100%	130 hours	Yes (extension)
Understanding of a current supply chain within an engineering / technology (or one using engineering / technology) sector considering academic and industry best practice			

Reassessment component is the same

Feedback on assessment

Standardised feedback provided for coursework element using an agreed template focussing on various elements (structured abstract, overview of SCM in company, research, presentation).

Availability

Courses

This module is Core for:

- Year 3 of UESA-HN15 BEng Engineering Business Management
- Year 4 of UESA-HN13 BEng Engineering Business Management with Intercalated Year

This module is Optional for:

- Year 3 of UESA-HH75 BEng Manufacturing and Mechanical Engineering
- Year 4 of UESA-HH74 BEng Manufacturing and Mechanical Engineering with Intercalated Year