UNIVERSITY of BRADFORD

Module Descriptor

Module Details	
Module Title	Supply Chain Management and Production
Module Code	ENB7008-B
Academic Year	2024/5
Credits	20
School	School of Engineering
FHEQ Level	FHEQ Level 7

Contact Hours	
Type	Hours
Lectures	20
Tutorials	20
Directed Study	160

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 1

Module Aims

1. To develop a comprehensive and in-depth knowledge on operations and supply chain management with a strong focus on sustainability and circular economy aspects. A strategic perspective will be adopted throughout this module.

2. To analyse globalisation, sustainability and technological aspects influencing the performance of operations and the supply network.

Outline Syllabus
Principles of operations and supply chain management. Principles of marketing, analysing the global marketing environment, understanding the impact of customer behaviour, distribution management and customer relationship management. Strategic fit in operations and supply chain strategies. Drivers and obstacles in supply chain management. Designing the supply chain network. Locating facilities. Planning supply and demand in the supply chain. Technologies to support operations and supply chain management. Supply chain integration. Lean operations and supply chain. Value Stream Mapping. Sustainable operations, carbon footprint, green supply chains and sustainability assessment. Reverse logistics. The role of supply chain management in the circular economy. Impact of globalisation in operations and the supply chain. Supplier selection. Assessment of supply chain risks. The concept of Industry 4.0. Analysing operations and supply chain management issues in different industries such as manufacturing, services, automotive, aerospace, oil and gas, health care and information technology.Principles of operations and supply chain management. Principles of marketing, analysing the global marketing environment, understanding the impact of customer behaviour, distribution management and customer relationship management. Strategic fit in operations and supply chain strategies. Drivers and obstacles in supply chain management. Designing the supply chain network. Locating facilities. Planning supply and demand in the supply chain. Technologies to support operations and supply chain management. Supply chain integration. Lean operations and supply chain. Value Stream Mapping. Sustainable operations, carbon footprint, green supply chains and sustainability assessment. Reverse logistics. The role of supply chain management in the circular economy. Impact of globalisation in operations and the supply chain. Supplier selection. Assessment of supply chain risks. The concept of Industry 4.0. Analysing operations and supply chain management issues in different industries such as manufacturing, services, automotive, aerospace, oil and gas, and information technology.

Learning Outcomes	
Outcome Number	Description
01	Critically analyse the strategic framework of operations and supply chain management.
02	Critically analyse key operations and supply chain management concepts in the context of different industries.
03	Explain how new technologies support operations and supply chain management, including the concept of Industry 4.0.
04	Explain key sustainability and circular economy issues relevant to operations and the supply chains.
05	Examine the principles of marketing, the global market environment, the impact of customer behaviour, and distribution management.
06	Develop and apply problem solving, IT, data and oral presentation skills to effectively communicate findings and solutions related to operations and supply chain management problems to a multidisciplinary engineering audience. Work in teams effectively and develop self-learning ability.

Learning, Teaching and Assessment Strategy

1. The module is delivered through a series of face-to-face lectures and tutorials, supported by appropriate case study materials. The learning materials (both lecture notes and case study tutorials) use a coherent problem-based approach, introducing management issues and tools and approaches to address these.
2. Students are advised to read the lecture notes before the face-to-face lectures to allow more interactive sessions and to receive feedback. In addition, lectures provide the opportunity to undertake guided reading to understand and address a variety of operations and supply chain management issues.
3. Face-to-face tutorial sessions offer the opportunity to interact more with students, reinforce learning, provide formative feedback and to further develop interpersonal and intercultural skills. As a distinctive approach to promote teamworking, participation in multidisciplinary group discussions and presentation skills, tutorial sessions include group discussions to analyse case studies with relevant supply chain management issues. Representatives of the discussion groups present their findings and reflection at the end of the sessions. Formative feedback is provided by the instructor and peers. This approach helps to develop interpersonal and intercultural skills, and allows to enhance a cohesive student experience. Thus, tutorial sessions promote the development of team-work, oral presentation, e-learning, peer feedback and self-learning skills.
4. Directed study hours are dedicate to self-study, reading study materials before lectures and tutorials, research and preparation of coursework.
5. The module is aligned with the CDIO innovative educational framework (Conceive, Design, Implement, Operate). This means that our learning strategy will be to encourage students to work in teams to Conceive potential solutions, Design new products, processes or services, Implement (or model) and test those designs and processes, and elaborate on the Operation of the product or solution. Thus, you will have numerous opportunities to be an active learner, to think and execute as an engineer leading real-world projects and reflect on operational and implementation aspects.

Summative assessment is through coursework as an individual report (3000 words) to analyse current and future challenges in operations and supply chain management. The report includes a detailed analysis of a specific supply chain challenge and how it is reflected on a specific case study from industry, including analysing key risks and sustainability issues. Thus, the design of the assessment considers ensuring academic integrity aspects. This assessment address learning outcomes: LO1, LO2, LO3, LO4, LO6.
Formative feedback is provided during oral presentations in tutorials. This assessment addresses learning outcomes: LO1, LO2, LO3, LO4, LO5, LO6.

Coursework includes the analysis of a specific challenge in operations and supply chain management. The coursework also includes a detailed analysis of a case study from industry to illustrate the challenge under study.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Coursework - Written	Analysis of a specific challenge in operations and supply chain management. 3000 words	100%
Formative		10 oral presentations in group discussions in tutorial sessions	N/A

Reading List

To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html

Please note:
This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

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