



Postgraduate Certificate in Operations and Supply Chain Management

MQF/EQF Level 7

Course Outline

Duration: 6 months

Overall Course Objectives

The learning outcomes presented below have been defined in line with the descriptors for the Level 7 of the Malta Qualification Framework.

Knowledge:

- Has a comprehensive and critical understanding of the principal current research issues in the specialisation area;
- Possesses multi-disciplinary theoretical and practical knowledge of management within the domain of the specialisation area.

Skills:

- Demonstrates capability in using knowledge and skills of the specialisation area to adapt to the fast-changing business environment and to efficiently manage people and projects within the specialisation area;
- Possesses specialised problem-solving skills in the specialisation area required to develop new knowledge and procedures to solve practical problems;
- Develops new skills in response to emerging knowledge and techniques in the domain of the specialisation area including digital skills and use of modern technologies;
- Demonstrates specialised knowledge of management that includes reflecting on social and ethical responsibilities linked to execution of the managerial function.

Competencies:

- Demonstrates autonomy in the direction of personal development and lifelong learning applicable to the business environment;
- Manages and transforms work or study contexts in the field of specialisation that are complex and unpredictable and require new strategic approaches;
- Has the learning skills to allow continuation to study the specialisation area in a manner that may be largely self-directed or autonomous.

COURSE OUTLINE

Supply Chains 4.0 for Digital Consumers

The supply chains 4.0 concept goes hand in hand with digital transformation and Industry 4.0, bringing innovation in terms of thinking, managing and delivering products to customers. Implementing new intelligent technologies together with promoting changes in the business culture are some of the key elements that will allow digital transformation to reach the entire distribution chain, from storage to distribution including retail and last mile operations. Omnichannel retail refers to a multichannel approach to selling products in which customers will be able to switch between digital and traditional channels according to their needs. The dynamics of Industry 4.0 will require managers to develop specific knowledge and skills in digital technology. This unit prepares students studying operations and supply chain management for professional success in the Industry 4.0 by equipping them with knowledge and skills required from modern and innovative operations managers.

Competencies

- Demonstrate the ability to respond to the fast-changing business environment of the retail industry by formulating adaptable strategies that help gain competitive and comparative advantages and reformulating existing strategies if needed;
- Manage and transform work contexts in the area of operations and supply chains that are complex and unpredictable and require new strategic approaches related to implementation of digital technology;
- Create a research-based diagnosis to problems in operations by integrating different concepts from the domain of the Industry 4.0 and supply chain 4.0;
- Demonstrate autonomy in the direction of learning about Industry 4.0 and digital supply chains and a high level of understanding of learning processes.

Inventory, Strategic Sourcing and Supplier Management

This unit guides students through inventory management, strategic sourcing and its collaboration models and tools, providing them with a deep understanding of how these processes can offer a competitive advantage for the whole network or drastically damage the organisation's health and performance. Students will develop their personal negotiation style, learning skills and strategies to become confident and effective negotiators in the area of strategic sourcing.

Competencies

- Manage total cost concept in order to achieve improved results and be able to integrate the planning and sourcing processes;
- Create a research-based diagnosis to problems in strategic sourcing and supplier management by assessing relevant data with the purpose to develop a forecast that fulfils demand and minimises out-of-stock situations;
- Demonstrate autonomy in leading and negotiating strategic matters related to an organisation's inventory and sourcing policies design and implementation.

Operations and Supply Chains Strategy and Finance

Different internal and external events may trigger a revision of a general corporate strategy which may consequently affect different elements within an organisation. Dealing with such changes requires an operations manager with an ability to evaluate and align technology, people and processes to ensure the sustainability of an organisation. This module provides students with knowledge and skills to design and execute an operations and supply chains strategy which would be effective enough to face different challenges across both functional and firm boundaries. The module also covers the processes and systems of a supply chain network and familiarises students with the professional language, concepts and tools necessary to assess how supply chains create value and how this affects operations and financial results of an organisation.

Competencies

- Manage and transform work contexts in the area of operations and supply chains that are complex and unpredictable and require new strategic approaches by designing and implementing an operations and supply chains strategy;
- Take responsibility for reviewing the strategic performance of teams in the areas of operations and supply chains;
- Create a research-based diagnosis to problems in operations and supply chains strategic planning by integrating financial information and by collaborating on results with a financial team and different stakeholders.

Business Intelligence in the Era of Big Data and AI

Capturing value from data is the new normal and transformational lever towards more digital and sustainable societies. Big data and Artificial Intelligence arise as the newest foundational elements: the former enables the possibility to manage unprecedented volume of data, variety of data sources, and velocity of data update ingested by new technologies while the latter facilitates the intelligent processing of information (without human intervention in most cases) to capture value added information to streamline processes and enhance current services or products. This unit will equip students with a fundamental understanding of the approaches to Business Intelligence and to the new data-driven business models. Upon completion of the unit students will demonstrate capability in using knowledge and skills of Big Data and Artificial Intelligence in implementing a Business Intelligence strategy in the fast-changing data-driven business ecosystem.

Competencies

- Take responsibility for contributing to professional knowledge by being a driver of adoption and implementation of Big Data and Artificial Intelligence technologies in organisations;
- Take responsibility for initiating strategic actions grounded on Business Intelligence diagnosis and for leading an organisation into a new direction;
- Has the learning skills to allow continuation to study new technological trends in Big Data and Artificial Intelligence and to evaluate their impact in a manner that may be largely self-directed or autonomous;
- Manage and transform work or study contexts that are complex and unpredictable that require new strategic approaches by using data analytics techniques and artificial intelligence solutions for business.

International Logistics and Transport

This unit provides an understanding of the key transportation concepts and the issues affecting the freight logistics industry and focuses on international transport and logistics management in the context of the global economy by covering operational, technological, economic and regulatory issues relevant to contemporary transport and logistics practice. Particular emphasis is placed on freight movements, intermodal transportation, modal characteristics, transportation regulation, pricing and costing, and the changes occurring in the industry such as security, environmental issues, and use of technology. Upon completion of the unit, students will be able to demonstrate specialised problem-solving skills required to evaluate various domestic and international transportation modes/alternatives and to provide strategic solutions for a series of freight logistics situations.

Competencies

- Create a research-based diagnosis to problems in international logistics and transportation by integrating knowledge from interdisciplinary fields such as operations management, policy and regulations, sustainability and climate change, and make judgements with incomplete or limited information;
- Manage projects in the field of international logistics and transportation by providing strategic solutions for a series of freight logistics situations;
- Demonstrate autonomy in the direction of learning about international logistics and transportation and global issues affecting freight logistics industry and a high level of understanding of learning processes.