



Postgraduate Diploma in Operations and Supply Chain Management

MQF/EQF Level 7

Course Outline

Duration: 9 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 comprehensive specialised knowledge and understanding of how cultural, economic, political, and technological frameworks affect management practices and how they can be managed effectively;
- Identifies and evaluates theoretical approaches necessary for planning and decision-making in business. These include ideas that support the modelling and management of the decisions across the broad range of functional areas;
- Has relevant knowledge of organisations, and their role in pursuing sustainable business in the context in which they operate and how they are managed in compliance with codes of ethics and Corporate Social Responsibility;
- Has a comprehensive and critical understanding of the principal current research issues in management.

Skills:

- Performs critical evaluation and analysis of business environment and of the main concepts, structures and approaches of strategic business management with incomplete or limited information;
- Demonstrates capability in using specialised skills to make decisions and create global strategies in different business operations, digital transformation, and finance in order to adapt to fast-changing business environment;
- Demonstrates leadership skills necessary to empower, inspire and manage teams, innovation and creative problem-solving while managing a business;
- Develops new skills in response to emerging knowledge and techniques in the domain of business management including digital skills and use of modern technologies;
- Demonstrates capability in using knowledge and skills of management to conduct research, taking into account the need for synthesis, setting objectives, methodological process and application of strategies;
- Develops an ability to identify and assess risks relating to the business, digital and financial environment and to design strategies to mitigate specific managerial risks;
- Monitors and maintains compliance with appropriate business regulations and formulates practical responses to the legal and external environment challenges associated with operating a business;
- Demonstrates capability in using data referring to business analytics to better forecast and execute business strategies and operations;
- Demonstrates specialised knowledge of management that includes reflecting on social and ethical responsibilities linked to execution of the managerial function;
- Demonstrates capability in using knowledge and skills of management to conduct research within a specific industry or functional area of a personal professional interest, taking into account the need for synthesis, setting objectives, methodological process and application of strategies.

Competencies:

- Demonstrates the ability to respond to the main political, economic, social, and technological variables and to formulate the priorities and strategies necessary for an organisation to succeed considering the global outlook and trends;
- Manages business projects by establishing a global vision that incorporates every facet of business development and constructs innovation and cultural diversity as an advantage in business contexts that are complex and unpredictable and require new strategic approaches;
- Is accountable for managing people and practicing management with commitment to democratic values and sustainability adopting the practices based on learning, service and social inclusion;
- Demonstrates autonomy in the direction of personal development and lifelong learning applicable to the business environment;
- Engages in critical analysis in the area of management and demonstrates independent thought, evaluation and problem-solving underpinned by evidence-based arguments;
- Takes responsibility for contributing to professional knowledge in management or a specific industry/functional area of a personal professional interest by identifying an existing business problem and by conducting original research.

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.

Digital Transformation, Innovation and Technology

This unit will equip students with a fundamental knowledge of the new digital economy and will provide an understanding of how the digital economy is shaping strategic options for managers, including the new technological driving forces, digitalisation, and the new challenges. Students will analyse the impact of digital transformation on society and businesses and assess to what extent technology can be used to create meaningful and positive innovative solutions to different issues. Upon completion of the unit, students will have knowledge and skills of digital transformation, innovation and technology and will be able to find solutions to the challenges of leading and managing innovative and transformational processes in modern organisations.

Competencies

- Manage and transform work contexts that are complex and unpredictable and require new strategic approaches based on innovation and digital transformation, understanding of technology, and analysis of internal and external environment;
- Demonstrate the ability to respond to the fast-changing business environment by analysing emerging and disrupting technologies and by having a vision to detect technologies that are yet in an early maturity stage but have a potential to become disruptive;
- Demonstrate autonomy in the direction of learning of digitalisation and innovation processes by conducting independent research and analysis of economic data, articles, news, and expert opinions.

Effective Teamwork and Project Management

This unit focuses on the issues surrounding the management of teams and projects. This is achieved by providing a specialised knowledge of organisational behaviour and factors that influence people's behaviour at work and how these factors link to performance in projects. The unit discusses an integrated approach to managing teams and projects as well as explores both technical and managerial challenges. Upon completion of the unit students will demonstrate capability in analysing workplace scenarios with the purpose to improve workforce and organisational performance and will develop applied project management skills and an ability to plan, implement, manage, and successfully achieve project objectives.

Competencies

- Take responsibility for transforming work or study contexts by leveraging individual differences, group dynamics and organisational culture and design and by balancing multiple objectives in ways that are accountable and achievable;
- Take responsibility for adapting the management of people and projects reflecting on the dynamic nature of the environment in which one operates;
- Effectively manage teams and projects and demonstrate the ability to respond to the fast-changing business environment when managing project risks, project execution, and project control.

Final Project (Capstone)

A Final Project (Capstone) is a multifaceted assignment that serves as a culminating academic and intellectual experience for Master students. Students take what they have learned throughout the course of their Master's programme and apply it to examine a specific idea/problem within their area of specialisation. A Final Project involves the identification of an existing problem in a real-world setting and the application of learned skills and methods to develop a solution that addresses the problem directly. There are several options among which students can choose for developing their Final Project: either it may be geared toward research or may be more oriented toward problem-solving. Solutions offered by students are usually interactive and realistic, meaning they can be implemented and used either in professional life or in further research and study.

Competencies

- Create a research-based diagnosis to problems by integrating knowledge from new or interdisciplinary fields and make judgements with incomplete or limited information;
- Take responsibility for contributing to professional knowledge in a specific industry or functional area of a personal professional interest by identifying an existing business management problem and by developing theoretical approaches to possible solutions;
- Demonstrate autonomy in the direction of learning and a high level of understanding of learning processes in a specific industry or functional area of a personal professional interest;
- Have the business research skills to allow continuation to study a specific business management problem in a manner that may be largely self-directed or autonomous.