

Master's Degree in Logistics Management

Comprehensive Exam Track

Introduction:

Globalization is affecting almost every aspect of the world's economy – and the world's economy is sustained by global logistics. Also, in the age of international interdependency among nations, the outsourcing phenomenon among companies, and economic transformation in developed countries to service and knowledge economy. As a result, the demand for qualified logistics and supply chain professionals is higher than ever. The field of logistics became a critical part of any business because a business cannot meet its strategic goals without having the supplies it needs to produce its goods given the mentioned drivers. Businesses around the world are searching for new ways to increase their profits and improve the delivery of services, and so effectively storing, transporting and distributing materials is an important competitive advantage and revenue stream.

The Aim:

The Masters in Logistics provides students with a coherent and principled framework and will equip students with the skills to critically understand current logistics practice in an increasingly dynamic business environment. The aim of the program:

1. To produce highly knowledgeable personnel in logistics management, one of the most needed resources in business and industrial sectors these days.
2. To create a new set of knowledge in logistics in Jordan and the region this will be the basis for future studies and researches.
3. To acquire knowledge in the fields' appropriate terminology, theoretical concepts, and analytical frameworks.
4. To acquire understanding approaches for improving efficiency and robustness of large logistics systems and developing the capability to sustainably solve problems via rational and responsible management decision making contribute to the targeted competence profile.

5. Moreover, students will gain an integrative perspective on the analysis, design, and control of complex and adaptive but nevertheless robust logistics systems.

Admission Requirements:

- A bachelor degree in a regular study program from a recognized university with a minimum GPA of ‘Good’.
- English language proficiency proof through passing the National English Language Test with a minimum score of 50% or TOEFL iBT with a minimum score of 32 or equivalent.
- The priority will be for applicants with a bachelor degree in Business or Engineering majors.
- The priority will be for applicants with relevant practical experience.

Study Plan

The course requirements for the Master’s degree in Logistics Management (Comprehensive Exam Track) are:

1. Obligatory courses (27 credit hours):

Course No.	Course Title	Credit Hours	Pre-requisite
MLOGS 711	Applied Data Analysis	3	----- *
MLOGS 712	Production & Operations Management	3	----- *
MLOGS 713	Managerial Accounting for Logistics	3	-----
MLOGS 721	Logistics and Supply Chain Management	3	----- *
MLOGS 722	Sourcing & Procurement Management	3	MLOGS 721
MLOGS 723	Transportation & Distribution Management	3	MLOGS 721
MLOGS 724	Warehousing & Inventory Management	3	MLOGS 721
MLOGS 732	Supply Network Design and Optimization	3	MLOGS 721
MLOGS 734	Global Logistics & Supply Chain Management	3	MLOGS 721

***Must be passed by students with acceptable GPA, and must take in the first semester with GPA of 75%**

2. Elective courses (9 credit hours):

Course No.	Course Title	Credit Hours	Pre-requisite
MLOGS 741	Maritime Logistics	3	MLOGS 732
MLOGS 742	Sustainable Logistics	3	MLOGS 732
MLOGS 743	Humanitarian Logistics	3	MLOGS 732
MLOGS 751	Special Topics in Logistics	3	MLOGS 732
MLOGS 752	Textile supply chain management	3	MLOGS 732
MLOGS 753	Supply chain management for SMEs	3	MLOGS 732
MLOGS 754	Project Management	3	MLOGS 732

3. Comprehensive Examination (0 credit hours):

Course No.	Course Title	Credit Hours	Pre-requisite
MLOGS 798	Comprehensive Examination	3	Department Approval

Courses Description

MLOGS 711: Applied Data Analysis (3 Credit Hours)

This course covers quantitative models and statistical methods for decision-making and data analysis. It considers the topics of: hypothesis testing, regression and correlation analysis, forecasting techniques, linear programming, decision analysis, and project management.

MLOGS 712: Production & Operations Management (3 Credit Hours)

This course is designed to introduce the students to the concepts, principles and practices in the field of operations management and its relationships with other functions in an organization. In addition, this course attempts to provide techniques required for the effective management of operations in both service and manufacturing organizations. Students will have substantial benefit from understanding the role of operations management in organizations.

MLOGS 713: Managerial Accounting for Logistics (3 Credit Hours)

The course covers the fundamentals of managerial accounting and its interfaces with logistics and supply chain management activities. It covers some practices and methods in support of planning, decision-making, and control. The course introduces cost terms and the use of accounting information in planning and control decisions. It presents the managerial accounting tools related to logistics and supply chain such as cost-volume-profit analysis, comprehensive budgeting, and relevant costs related to nonrecurring decisions, responsibility accounting, and performance evaluation. It also covers capital budgeting, and concludes with a discussion of strategic management accounting techniques in the context of logistics and supply chain management.

MLOGS 721: Logistics and Supply Chain Management (3 Credit Hours)

The focus of this course is on supply chain management. Topics include the evolution and objective of supply chain management; the major stages and processes involved in planning and managing supply chains; and why the concept of strategic fit is so important to supply chain managers. Successful students will also understand the major drivers of supply chain performance; key metrics for managing performance; and how to plan and forecast demand under conditions of uncertainty to meet desired customer service levels. This course also addresses the purpose and content of the Supply Chain Operations Reference

(SCOR) Model. Case studies and problems are used throughout the course to highlight important principles and best practices in supply chain management.

MLOGS 722: Sourcing & Procurement Management (3 Credit Hours)

This course addresses the critical role of purchasing in logistics and supply chain management. The course begins with a review of the basic components of purchasing followed by a discussion of the role of purchasing in the supply chain and how it contributes to the strategy and profitability of the enterprise. The course also addresses the legal aspects of purchasing and the relationship between purchasing and inventory management, materials management, just-in-time manufacturing, and manufacturing resource planning. In addition, this course covers the issues of contract management, negotiation, and supplier relationship management. It covers contract management from both sellers and buyers perspectives. It also discusses bid and proposal preparations, contracting, negotiation skills, and dispute resolution.

MLOGS 723: Transportation & Distribution Management (3 Credit Hours)

Transportation plays a key role in today's global economy. The focus of this course is on understanding the technical, operational, and economic characteristics of the different freight and package transportation modes and their application in integrated physical distribution systems. This course addresses regional, national, and international passenger transportation and explores the impact of the different transportation modes, transportation intermediaries, and intermodality on small package, freight, and passenger systems. The course also addresses national and international regulatory constraints and their impact on passenger transportation and global supply chain management. Additional topics include carrier and shipper strategies; alliance management and the use of third parties; transportation metrics; transportation security; and the role of information technology in modern transportation management.

MLOGS 724: Warehousing & Inventory Management (3 Credit Hours)

This course covers two Topics. The inventory part aims to introduce the students to the fundamental nature of inventory from a financial, physical, forecasting, and operational standpoint. The ultimate goal of this course is to present immediately usable information in the areas of forecasting, physical control and layout, and problem recognition and resolution. The warehouse part is designed to help students to understand warehouse functions, processes, organization and operations. It includes analysis of warehouse location, operation, management, controls, procedures, finance, security, cargo/materials handling, and productivity.

MLOGS 732: Supply Network Design and Optimization (3 Credit Hours)

This module examines the key issues that companies must address in designing a supply network and the theories underpinning this; the practice of supply network design and optimization; as well as awareness of the tradeoffs involved in the optimization of logistical networks. Optimized supply network leads to minimum total system costs and hence enhance profitability and competitiveness. It outlines the essential concepts to understand the different types of supply chains and discusses how different supply chains can be designed for different products.

MLOGS 734: Global Logistics & Supply Chain Management (3 Credit Hours)

Today, globalization is affecting almost every aspect of the world's economy - and the world's economy is sustained by global logistics. The focus of this course is on understanding the role of logistics and supply chain management in meeting the needs of the transnational enterprise, from the sourcing of raw materials through delivery of the finished product to the final customer. The course addresses the role and scope of logistics in the global economy; key strategies for supporting different market entry alternatives; the impact of different transportation modes on international supply chain management; the use of international commerce terms and contracts; the impact of exchange rates on supply chain profitability; supply chain security; and the role of global supply chain management as a key source of competitive advantage. A number of case studies are also analyzed throughout the course to highlight important principles and best practices in global logistics and supply chain management.

MLOGS 741: Maritime Logistics (3 Credit Hours)

This course provides students with an understanding of the maritime industry. It starts with an introduction to the history maritime industry, the maritime geography and the role of maritime transportation in facilitating international commerce. This course also covers the concept of shipping, and some of the technical and operational aspects of shipping management. In addition, the fundamental legal framework for international maritime trade and shipment will be considered.

MLOGS 742: Sustainable Logistics (3 Credit Hours)

This course is designed to enhance students' understanding of sustainability in logistics from the economic, environment, and social perspectives. The topics to be covered include: green logistics and green supply

chains; green transportation and packaging; supply chain audit; carbon footprint; and laws and regulations related to logistics and supply chain management. In addition, the topics of sustainable purchasing and procurement, sustainable warehouse and storage, and sustainable supply chains will be considered. The reverse logistics system will be a crucial concept through different parts of the course.

MLOGS 743: Humanitarian Logistics (3 Credit Hours)

Humanitarian logistics is the management and execution of the activities needed to plan for and move relief materials and supplies, along with related funds and information, from suppliers to beneficiaries. Logistics activities include needs assessment, planning, procurement, transport, warehousing, distribution to beneficiaries, and reporting. Effective, timely logistics is critical to response to emergencies arising from armed conflicts, epidemics, famine, and natural disasters. This course provides an overview of humanitarian logistics by introducing the challenging context in which it takes place, the organizations typically involved, the products and services needed, and the operational approaches taken and challenges encountered in meeting the needs. Issues covered include operational challenges, funding issues, coordination and strengthening local capacity. The course combines lectures, readings and teaching cases covering organizations such as IFRC, UNICEF and MSF.

MLOGS 751: Special Topics in Logistics (3 Credit Hours)

This course considers new trends in supply chain management and innovative tools and techniques in logistics. New topics and influential scientific articles in logistics and supply chain management will be an essential part of this course. Special effort will be focused on enhancing students' abilities to provide contributions in the topics discussed through individual or group research projects.

MLOGS 752 Textile Supply Chain Management (3 Credit Hours)

This course focuses on the textile industry in which efficient and effective supply chains plays a crucial role in enhancing profitability and competitiveness. The agility and flexibility needed in this sector require the highest level of responsiveness in the supply chain. This course will focus on the nature of the textile industry in term of demand characteristics, market trends, supply management, and product design and change.

MLOGS 753 Supply Chain Management for SMEs (3 Credit Hours)

This course focuses on managing supply chains in the small and medium-sized enterprises. The SMEs constitute a vital part of the local and global economies. The topics will be considered during this course focuses on enhancing profitability and reducing costs for SMEs through more integration on the supply chains and higher efficiencies in logistics. In addition, the SMEs' purchasing practices, the distribution channels used by SMEs, and the synchronization of inbound and outbound logistics activities will be considered.

MLOGS 754: Project Management (3 Credit Hours)

This course focuses on concepts and methodologies of project management, procedures and techniques used in panning, monitoring and controlling projects. Topics included definitions and types of projects, project selection criteria, managers' selection criteria, planning and budgeting, SWOT analysis, and termination projects.

MLOGS 798: Comprehensive Examination (0 Credit Hours)

After the successful completion of all obligatory and elective courses with a minimum cumulative average of 75%, students should be able to pass a comprehensive, four hours, exam. To pass, the student should have an overall grade of minimum 70%. The exam aims to measure the students' ability to understand and link the basic and advanced concepts they have learned throughout their study duration.