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**German Jordanian University**

**School of Business**

**Department of Logistics**

**Master of Sciences in Logistics Management**

**Thesis Track**

**Study Plan 2017-2018**

# Program Objectives

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 provide students with a solid foundation of the specialized terminology, theoretical concepts, and analytical skills in different functions of logistics and supply chain management.
2. To prepare high caliber professionals in logistics management and prepare them for the local and international job markets.
3. To build capacities in the field of logistics management to enhance professional practices and academic research according to the various industrial needs.
4. To equip students with different approaches to improve efficiency and robustness of large logistics systems.
5. To develop students’ capabilities in designing sustainable logistics and supply chain networks.
6. To improve students’ decision-making skills and problem-solving abilities using scientific.

# Learning Outcomes

A successful completion of the M.Sc. in Logistics Management program enables students to:

1. Develop a thorough understanding of the important role, trends, practices and theories of logistics management in today’s business environment utilizing case problems.
2. Become familiar with specialized functions of logistics management including transportation, distribution, warehousing, inventory and procurement.
3. Learn to use optimization tools in designing supply networks and to apply data analysis techniques.
4. Develop and utilize critical management skills such as negotiating, working effectively within a diverse business environment, ethical decision making and use of accounting information.
5. Demonstrate the use of effective written and oral communications, critical thinking, team building and presentation skills as applied to business problems.
6. Conduct scientific research that addresses a contemporary issue or problem related to logistics fields concluding with a written and oral presentation of the findings.

# Course Delivery Methods

Courses are in one of the following three methods:

* **Face-to-Face (F2F) Method**

Courses using this method are delivered by faculty in person in regularly scheduled class sessions physically on campus.

* **Blended (BLD) Method**

Courses are delivered in a hybrid mode of physical face-to-face class sessions and asynchronous material including online instructional videos, presentations, projects, and similar learning activities.

* **Online (OL) Method**

Courses are delivered exclusively online. This method consists of a hybrid of synchronous regularly scheduled class sessions delivered via the Internet, and asynchronous material including online instructional videos, presentations, projects, and similar learning activities. Virtual classrooms utilizing different online platforms are used. No physical face-to-face meetings are required.

# Admission Requirements

To apply for admission, the following minimum requirements must be met:

1. A bachelor’s degree of at least with a grade of at least good in any discipline.
2. Priority is given to holders of a bachelor's degree in majors offered by the faculties of management, engineering, information technology and pharmacy.
3. Priority is given to applicants who have practical experience in a related field. Experience certificates must be attached to the admission application.
4. Proof of English language proficiency.
5. Lectures are delivered at the GJU’s campus in Jabal Amman - Dar Othman Bedir.
6. Credit hour fee: 200 Jordanian dinars.
7. Program hours: 36 credit hours.

# Degree Requirements (36 Credit hours)

|  |  |
| --- | --- |
| **Classification** | **Credit Hours** |
| Compulsory courses | 21 |
| Elective courses | 6 |
| Thesis | 9 |
| **Total** | **36** |

# Curriculum (36 Credit hours)

### Compulsory Requirements: (21 credit hours)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Course ID** | **Course Name** | **Credit Hours** | **ECTS** | **Contact Hours** | | **Type** | **Prerequisites / Corequisites** |
| **Lect** | **Lab** |
| LOGS711 | Applied Data Analysis | 3 | 7 | X |  | F2F | - |
| LOGS712 | Production & Operations Management | 3 | 7 | X |  | F2F | - |
| LOGS721 | Logistics and Supply Chain Management | 3 | 7 | X |  | F2F | - |
| LOGS722 | Sourcing & Procurement Management | 3 | 7 | X |  | F2F | LOGS721 |
| LOGS723 | Transportation & Distribution Management | 3 | 7 | X |  | F2F | LOGS721 |
| LOGS724 | Warehousing & Inventory Management | 3 | 7 | X |  | F2F | LOGS721 |
| LOGS732 | Supply Network Design and Optimization | 3 | 7 | X |  | F2F | LOGS721 |
|  | **Total** | **21** | **49** | **21** | **00** |  |  |

### Elective Courses: (6 credit hours out of the following)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Course ID** | **Course Name** | **Credit Hours** | **ECTS** | **Contact Hours** | | **Type** | **Prerequisites / Corequisites** |
| **Lect** | **Lab** |
| LOGS741 | Maritime Logistics | 3 | 7 | X |  | BLD | LOGS732 |
| LOGS742 | Sustainable Logistics | 3 | 7 | X |  | BLD | LOGS732 |
| LOGS743 | Humanitarian Logistics | 3 | 7 | X |  | BLD | LOGS732 |
| LOGS751 | Special Topics in Logistics | 3 | 7 | X |  | BLD | LOGS721 |
| LOGS752 | Textile supply chain management | 3 | 7 | X |  | BLD | LOGS732 |
| LOGS753 | Supply chain management for SMEs | 3 | 7 | X |  | BLD | LOGS732 |
| LOGS754 | Project Management | 3 | 7 | X |  | BLD | LOGS732 |
| LOGS734 | Global Logistics & Supply Chain Management | 3 | 7 | X |  | BLD | LOGS721 |
| LOGS713 | Managerial Accounting for Logistics | 3 | 7 | X |  | BLD | - |
| LOGS797A | Logistics Management Project 1 | 3 | 7 |  |  | BLD | LOGS732\* |
|  | **Minimum required** | **6** | **14** | **6** | **00** |  |  |

\*Students who intend to transfer to the thesis track should take Logs797A as a requirement for the transfer.

### Thesis/Comprehensive Exam/Other: (9 credit hours)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Course ID** | **Course Name** | **Credit Hours** | **ECTS** | **Contact Hours** | | **Type** | **Prerequisites / Corequisites** |
| **Lect** | **Lab** |
| LOGS799A | Master Thesis | 3 | 7 |  |  | OL | Departmental Approval |
| LOGS799B | Master Thesis | 6 | 20 |  |  | BLD | LOGS799A |
|  | **Minimum required** | **9** | **27** | **00** | **00** |  |  |

1. **Study Plan Guide**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **First Year** | | | | | | | |
| **First Semester** | | | | | | | |
| **Course ID** | **Course Name** | **Credit Hours** | **ECTS** | **Contact Hours** | | **Type** | **Prerequisites / Corequisites** |
| **Lect** | **Lab** |
| LOGS721 | Logistics and Supply Chain Management | 3 | 7 | X |  | F2F | - |
| LOGS711 | Applied Data Analysis | 3 | 7 | X |  | F2F | - |
| LOGS712 | Production & Operations Management | 3 | 7 | X |  | F2F | - |
|  | **Total** | **9** | **21** | **9** | **0** |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **First Year** | | | | | | | |
| **Second Semester** | | | | | | | |
| **Course ID** | **Course Name** | **Credit Hours** | **ECTS** | **Contact Hours** | | **Type** | **Prerequisites / Corequisites** |
| **Lect** | **Lab** |
| LOGS732 | Supply Network Design and Optimization | 3 | 7 | X |  | F2F | LOGS721 |
| LOGS724 | Warehousing & Inventory Management | 3 | 7 | X |  | F2F | LOGS721 |
|  | Elective | 3 | 7 | X |  | BLD |  |
|  | **Total** | **9** | **21** | **9** | **0** |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **First Year** | | | | | | | |
| **Summer Semester** | | | | | | | |
| **Course ID** | **Course Name** | **Credit Hours** | **ECTS** | **Contact Hours** | | **Type** | **Prerequisites / Corequisites** |
| **Lect** | **Lab** |
|  | Elective | 3 | 7 | X |  | BLD |  |
|  | Elective | 3 | 7 | X |  | BLD |  |
|  | **Total** | **6** | **10** | **6** | **0** |  |  |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Second Year** | | | | | | | |
| **First Semester** | | | | | | | |
| **Course ID** | **Course Name** | **Credit Hours** | **ECTS** | **Contact Hours** | | **Type** | **Prerequisites / Corequisites** |
| **Lect** | **Lab** |
| LOGS723 | Transportation & Distribution Management | 3 | 7 | X |  | F2F | LOGS721 |
| LOGS722 | Sourcing & Procurement Management | 3 | 7 | x |  | F2F | LOGS721 |
| LOGS799A | Master Thesis | 3 | 7 |  |  | OL | Departmental Approval |
|  | **Total** | **9** | **21** | **6** | **0** |  |  |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Second Year** | | | | | | | |
| **Second Semester** | | | | | | | |
| **Course ID** | **Course Name** | **Credit Hours** | **ECTS** | **Contact Hours** | | **Type** | **Prerequisites / Corequisites** |
| **Lect** | **Lab** |
| LOGS799B | Master Thesis | 6 | 20 |  |  | BLD | LOGS799A |
|  | **Total** | **6** | **20** | **0** | **0** |  |  |

# Course Descriptions

# Compulsory Courses

|  |  |  |
| --- | --- | --- |
| **LOGS711: Applied Data Analysis** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: no* | | |
| *Corequisites: no* | | |

|  |  |  |
| --- | --- | --- |
| **LOGS712: Production & Operations Management** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: no* | | |
| *Corequisites: no* | | |
|  | | |
| **LOGS721: Logistics and Supply Chain Management** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: no* | | |
| *Corequisites: no* | | |
| **LOGS722: Sourcing & Procurement Management** | **3 Cr Hr** | **7 ECTS** |
| 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 buyer's perspectives. It also discusses bid and proposal preparations, contracting, negotiation skills, and dispute resolution. | | |
| *Prerequisites: LOGS721* | | |
| *Corequisites: no* | | |

|  |  |  |
| --- | --- | --- |
| **LOGS723: Transportation & Distribution Management** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: LOGS721* | | |
| *Corequisites: no* | | |
|  | | |
| **LOGS724: Warehousing & Inventory Management** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: LOGS721* | | |
| *Corequisites: no* | | |
| **LOGS732: Supply Network Design and Optimization** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: LOGS721* | | |
| *Corequisites: no* | | |

# Elective Courses

|  |  |  |
| --- | --- | --- |
| **LOGS741: Maritime Logistics** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: LOGS732* | | |
| *Corequisites: no* | | |
| **LOGS742: Sustainable Logistics** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: LOGS732* | | |
| *Corequisites: no* | | |
|  | | |
| **LOGS743: Humanitarian Logistics** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: LOGS732* | | |
| *Corequisites: no* | | |
| **LOGS751: Special Topics in Logistics** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: LOGS721* | | |
| *Corequisites: no* | | |
| **LOGS752 Textile Supply Chain Management** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: LOGS732* | | |
| *Corequisites: no* | | |
| **LOGS753 Supply Chain Management for SMEs** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: LOGS732* | | |
| *Corequisites: no* | | |
| **LOGS754: Project Management** | **3 Cr Hr** | **7 ECTS** |
| 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 duration. | | |
| *Prerequisites: LOGS732* | | |
| *Corequisites: no* | | |
| **LOGS713: Managerial Accounting for Logistics** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: no* | | |
| *Corequisites: no* | | |
| **LOGS734: Global Logistics & Supply Chain Management** | **3 Cr Hr** | **7 ECTS** |
| 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. | | |
| *Prerequisites: LOGS721* | | |
| *Corequisites: no* | | |
| |  |  |  | | --- | --- | --- | | **LOGS797A: Logistics Management Project 1** | **3 Cr Hr** | **7 ECTS** | | This course is intended for the students to practice the knowledge and skills about research methodology. Research Methodology is a hands‐on course designed to impart education in the foundational methods and techniques of academic research within the logistics management context. Students would examine and be practically exposed to the main components of a research framework i.e., problem definition, research design, data collection, ethical issues in research, report writing, and presentation. Once equipped with this knowledge, students would be well‐placed to conduct disciplined research under supervision in an area of their choosing. The outcome of the course would be a research/thesis proposal to be pursued in the “Logistics Management Project 2” course or as a master thesis. | | | | *Prerequisites: LOGS732* | | | | *Corequisites: no* | | | | | |

# Thesis/Comprehensive Exam/Other

|  |  |  |
| --- | --- | --- |
| **LOGS799A: Master Thesis** | **3 Cr Hr** | **7 ECTS** |
| This master thesis is the final research project which is offered to practice the knowledge and skills about research methodology by a student. During one semesters, the student should work closely with his/her supervisor to come up with a piece of research as per the choice of both of them. The project must be done methodically, well organized as per the guidelines given by the supervisor. This part of the thesis involves identifying the scope of work, methodology, and literature review. | | |
| *Prerequisites:* Departmental Approval | | |
| *Corequisites: no* | | |
| **LOGS799B: Master Thesis** | **9 Cr Hr** | **20 ECTS** |
| The second part of the thesis encompasses data collection and analysis, writing the manuscript, and proofreading. Finally, the student has to present and defend this project in front of a defense committee. | | |
| *Prerequisites: LOGS799A* | | |
| *Corequisites: no* | | |