Module Description, available in: EN

International Logistics

General Information

Number of ECTS Credits

3

Module code

TSM_Logistic

Valid for academic year

2025-26

Last modification

2022-01-09

Coordinator of the module

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Explanations regarding the language definitions for each location:

- Instruction is given in the language defined below for each location/each time the module is held.
- Documentation is available in the languages defined below. Where documents are in several languages, the percentage distribution is shown (100% = all the documentation).
- The examination is available 100% in the languages shown for each location/each time it is held.

	Lausanne			Lugano	Zurich		
Instruction					**X** E 100%		
Documentation					**X** E 100%		
Examination					**X** E 100%		

Module Category

TSM Technical scientific module

Profile Recommendations

This module is recommended for the following profiles:

	Zurich
Profile	BE

Lessons

2 lecture periods and 1 tutorial period per week

Entry level competences

Prerequisites, previous knowledge

- Basic knowledge of logistics
- Basic knowledge in operations management
- Good knowledge of English

Brief course description of module objectives and content

The module starting from the analysis of the whole Supply Chain configuration and management process, underlines in particular the greater importance role that logistics and procurement are assuming in modern collaborative Supply Chain. Procurement is a strategic business driver that allows companies to efficiently focus on their key competences and activities while leveraging competences and cost advantage stemming from a complex supplier network, which provides products and services. Logistics activities are crucial for modern Supply Chains, ensuring a smooth sharing of information and materials among manufacturers and their globalized supplier networks. Moreover, distribution logistics plays a crucial role in delivering customer experiences and value, thanks to differentiated options and services. The evolution of Supply Chain activities in reaction to new paradigms, such as sustainability and mass customization, and thanks to technological innovations, such as Industry and SCM 4.0, will be analysed in order to better understand future challenges and opportunities.

Aims, content, methods

Learning objectives and competencies to be acquired

The module prepares for a professional career in industrial Supply Chain Management (SCM). Possible fields of activity include business development, innovation, business processes and quality improvement, the management of Supply Chains at national and international level.

The module will provides the necessary knowledge to understand the variety of possible SCM concepts, including sourcing, logistics and outsourcing/offshoring. An overview of the potential alternatives will be achieved through the analysis and knowledge acquisition about strategies, management processes, structures and technical elements, based on the design principles of different operational procurement and distribution needs of multiple branches.

The students will be able to manage strategical, tactical and operational decisions; starting from the establishment of correct strategies suitable for given targets, design a possible operating strategy for the planned issues and implement at tactical and operational level the required coordination and management mechanisms. For this reason, methodological tools for deriving and implementing suitable strategies (understanding of the influence of the industrial sector context, establishment of realistic targets, identification of decision drivers and key processes, designing of suitable strategies, managing and controlling of internal processes and their integration with those of the supply chain partners) will be introduced.

In order to deepen the level of knowledge and competences, while dealing with practical aspects and comparison of alternatives, quantitative methods will be presented and applied by the students through examples and tasks. Case studies, presented by industrial and scientific experts, will allow to better understand the complexity linked to the application in real contexts of the proposed methodologies and to face these challenges.

Module content with weighting of different components

SCM integrates all activities involved in the flow of goods and services from providers to the final customers and is fundamental for achieving company success in a globalized, dynamic and uncertain business environment. The ability to react to customer requirements and matching them with the network resources is critically important in SCM and requires among other things focusing on core competences, making coherent outsourcing/offshoring decisions as well as choosing suitable configurations of the distribution network. Aside from those strategic considerations, decisions have to be made on the tactical and operational levels. The module will deal with models and concepts of international logistics, including sourcing and outsourcing/offshoring, e.g.:

- SCM strategy and internationalization including outsourcing/offshoring

- Contract management (statement of requirements)

- SCM management and controlling

- Models and concepts of international logistics including warehousing and transport

- Rules and regulations in international logistics

- Governance, Corporate Social Responsibility, and quality assurance in SCM

Under the umbrella provided by the macro areas listed above a variety of topics will be addressed, such as:

- SCM introduction (definitions, 7 principles, 8 key activities, etc.)
- Supply Chain design, configuration and coordination
- Sustainable SCM
- Decision Support Tools in SCM
- Risk Management in SCM
- Innovation in SCM (Industry and SCM 4.0, new services, etc.)
- International Logistics (air, sea, rail, road)
- Inter-modality
- Last Mile distribution and Omnichannel
- Procurement Strategy Development
- (Strategic) Sourcing Lifecycle
- Supply market competitiveness appraisal
- Supplier Relationship Management
- Outsourcing/Offshoring (and Insourcing/Nearshoring)
- Purchasing negotiation

Teaching and learning methods

- Lectures / presence
- Tutorial / presence
- Self-study

Literature

- The presentations distributed by the lecturers will be the main source
- Specific scientific and “magazine” articles will be uploaded for covering specific topics and applications

Additional material for in-depth analysis can be found for instance in the following books:

- Logistics & Supply Chain Management, 5th Edition, Martin Christopher, 2016, Pearson Education
- Purchasing and Supply Chain Management: Analysis, Strategy, Planning and Practice, A.J. Van Weele, 2009, Cengage
- The Handbook of Global Outsourcing and Offshoring 3rd edition, I. Oshri, J. Kotlarsky, L.P. Willcocks, 2015, Palgrave

Assessment

Additional performance assessment during the semester

The module does not contain an additional performance assessment during the semester

Basic principle for exams

As a rule, all standard final exams are conducted in written form. For resit exams, lecturers will communicate the exam format (written/oral) together with the exam schedule.

Standard final exam for a module and written resit exam

Kind of exam

Written exam

Duration of exam

120 minutes

Permissible aids

Aids permitted as specified below:

Permissible electronic aids

PDF version of the slide lessons and/or written personal summaries.

No other material or information search is allowed (PC in flight mode, no connection available)

Other permissible aids

Open book. Printed documents (all lectures) and/or written personal summaries

Exception: In case of an electronic Moodle exam, adjustments to the permissible aids may occur. Lecturers will announce the final permissible aids prior to the exam session.

Special case: Resit exam as oral exam

Kind of exam

Oral exam

Duration of exam

30 minutes

Permissible aids

Aids permitted as specified below:

Permissible electronic aids

PDF version of the slide lessons and/or written personal summaries.

No other material or information search is allowed (PC in flight mode, no connection available)

Other permissible aids

Open book. Printed documents (all lectures) and/or written personal summaries