Structure and Processes of Logistics

Module code: MSTL	**Workload:** 150 h	**Semester:** (WiSe) Sem.
Credits: 5	**Duration:** 1 Sem.	**Frequency:** each winter term
Independent study: 90 h	**Class size:**	**Contact hours:** 4 SWS / 60 h
Module-No.: 7956	**Exam.-No.:** 9999	**Percentage of final score:** PEM: 4,16; PuM: 5,55; HI: 5,55
Language of instruction: englisch	**Vers. BPO/MPO min.:** MPO-2017	671

Type of course:

Seminaristische Vorlesung: 2 SWS/ 30 h, Übung: 2 SWS/ 30 h

Learning outcomes/Competencies:

Students acquire an overview of different types of logistics structure and supply chain.
Students know about the different fields of logistics from internal logistics to external logistics, from material flow to information flow and from tactical decisions to operational processes.
Students are aware of the standards, rules, laws and key performance indexes for evaluating and enhancing logistics practices.
Students are able to apply analytical and optimization methods for making decisions and solving industrial logistics problems.
Students may understand and consider different aspects of logistics including costs, facilities, technologies, organizations and resources for the planning of a complicated logistics system.

Content/subject aim:

- Introduction of theoretical frameworks of logistics
- Development of logistics and supply chain management
- Detailed management fields and processes of logistics
- Methods for logistics network confirmation and facility location determination Information system standards for effective logistics and supply chain management
- Inventory controlling and management policies for one facility
- Inventory management strategies for the whole supply chain
- Overview of different types of warehouses
- General warehouse organization and management processes
- Storage and material flow technologies for different logistics handling units
- Warehouse layout and resource planning
- Order picking organizations for different types of orders
- Strategies, methods and technologies for improving order picking performance
- Transportation modes, transloading and transportation management for international logistics
- Methods for subjective and objective logistics decision making

Teaching methods:

Lecture, charts, group work

Prerequisites for participation:

None

Assessment methods / First Examinator / Second Examinator:

Written examination and report / Prof. Li / Prof. Jungkind

Requirements to get the credit points:

Passed examination and report submission

This module is used in the following degree program: (in semester-no.)

(WiSe) M.Sc. Produktion und Management (WP)

(WiSe) M.Sc. Production Engineering and Management (WP)

(WiSe) M.Sc. Wirtschaftsingenieur der Holzindustrie (WP)

Weight of grade for final grade:

5/90: M.Sc. Produktion und Management

5/120: M.Sc. Production Engineering and Management

5/90: M.Sc. Wirtschaftsingenieur der Holzindustrie

Responsibility for module / Teacher of the submodule:

Prof. Dr.- Ing. Li Li

Other information / literature:

Literature:

- Baumgarten, H., Wiendahl, H.P., Zentes, J.: Logistik-Management, Strategien - Konzepte - Praxisbeispiele. Heidelberg: Springer-Verlag, 2000
- Bowersox, D., Closs, D.J.: Logistical Management: The Integrated Supply Chain Process. McGraw-Hill, 1996
- Burt, D.N., Dobler, D.W., Starling, S.L.: World Class Supply Management: The Key to Supply Chain Management. 7th Edition, McGraw-Hill, 2002
- David, P.A., Stewart, R.D.: International Logistics - The Management of Inter-national Trade Operations. 3rd Edition, Atomig Dog, 2008
- Frazelle E.: World-Class Warehousing and Material Handling. McGraw-Hill, 2002
- Gleißner, H., Femerling, J.C.: Logisitk Grundlagen - Übungen - Fallbeispiele. 2. Auflage, Wiesbaden: Gabler Verlag, 2012
- Nahmias, S.: Production and Operations Analysis. 6th Edition, McGraw-Hill, 2008
- Simchi-Levi, D., Kaminsky, P. Simchi-Levi, E.: Designing and Managing the Supply Chain: Concept, Strategies and Case Studies. 3rd Edition, McGraw-Hill/Irwin, 2008
- Wannenwetsch, H.: Integrierte Materialwirtschaft und Logistik - Beschaffung, Logistik, Materialwirtschaft und Produktion. 3. Auflage, Berlin u. a.: Springer-Verlag, 2006.
- Werner, H.: Supply Chain Management Grundlagen, Strategien, Instrumente und Controlling. Wiesbaden: Springer Gabler, 2013