

Module: Materials Handling

Level	Bachelor	Short Name	
Responsible Lecturers	Rainer Lehmann; Prof. Dr. rer. pol. Dipl.-Ing. oec.		
Department, Facility	Mechanical Engineering and Business Administration		
Course of Studies	Business Administration and Engineering, Bachelor		
Compulsory/elective	Compulsory	ECTS Credit Points	5
Semester of Studies	6	Semester Hours per Week	4
Length (semesters)	1	Workload (hours)	150
Frequency	SuSe	Presence Hours	60
Teaching Language	English	Self-Study Hours	90

The following section is filled only if there is **exactly one** module-concluding exam.

Exam Type	Written Exam	Exam Language	English
Exam Length (minutes)	90	Exam Grading System	One-third Grades
Learning Outcomes	The course enables the students to: <ul style="list-style-type: none"> Analyze and optimize the material flow in factories, warehouses etc. Select and design material handling systems in factories, warehouses etc. 		
Participation Prerequisites			

The previous section is filled only if there is **exactly one** module-concluding exam.

Consideration of Gender and Diversity Issues	✓ Use of gender-neutral language (THL standard) ✗ Target group specific adjustment of didactic methods ✗ Making subject diversity visible (female researchers, cultures etc.)
Applicability	
Remarks	

Module Course: Materials Handling

(of Module: Materials Handling)

Course Type	Lecture	Form of Learning	Presence
Mandatory Attendance	no	ECTS Credit Points	5
Participation Limit		Semester Hours per Week	4
Group Size		Workload (hours)	150
Teaching Language	English	Presence Hours	60
Study Achievements ("Studienleistung", SL)		Self-Study Hours	90
SL Length (minutes)		SL Grading System	

The following section is filled only if there is a course-specific exam.

Exam Type		Exam Language	
Exam Length (minutes)		Exam Grading System	
Learning Outcomes			
Participation Prerequisites			

The previous section is filled only if there is a course-specific exam.

Contents	<ul style="list-style-type: none"> • Introduction • Packaging and Unitization • Material Handling Equipment • Warehousing • Planning of Material Handling Systems • IT-Systems for Material Handling
Literature	<p>Bartholdi III, John J.; Hackman, St. T.: Warehouse and Distribution Science. Release 0.96. Georgia Institute of Technology 2014</p> <p>Frazelle, F.: World Class Warehousing and Material Handling. New York et al: McGraw-Hill 2001</p> <p>Heragu, S.S.: Facilities Design. Boca Raton: CRC 2008</p> <p>Kay, M.G.: Material Handling Equipment. Fitts Department of Industrial and Systems Engineering. North Carolina State University 2012</p> <p>Martin, H.: Warehousing and Transportation Logistics. London: Kogan Page 2018</p> <p>Richards, G.: Warehouse Management. London: Kogan Page 2014</p> <p>ten Hompel, M.; Schmidt, Th.: Warehouse Management. Berlin et al: Springer 2007</p> <p>Ray, S.: Introduction to Materials Handling. New Dehli et al: New Age 2008</p>
Remarks	