Faculty of Business, Economics and Law
Faculty of Automotive Systems and Production

Module Catalog
Logistics

Bachelor of Science

This is a translation of the original German document. For all legal purposes, only the German version of the module catalog shall be considered binding. This is the translation of the module catalog “PO2”.

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Technology
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Technology
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Cologne, 10.02.2022

Ref.: Plagiarism checks for the final theses of the degree programs Logistics (B. Sc.) and Supply Chain and Operations Management (M. Sc.)

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Content

Module Catalog | Logistics, Bachelor of Science

1 Study Objectives

Logistics includes all tasks for integrated planning, coordination, execution and control of the flow of goods and goods-related information within and between companies. The degree program B. Sc. Logistics shall prepare students – based on scientific knowledge and methods – for a demanding professional life in the logistics environment, provide them with the necessary in-depth technical knowledge and enable them to handle the constantly changing job market. The business environment of the 21st century is characterized by competitive markets, considerable structural change and increasingly complex economic problems. New technologies and media, changing and increasingly differentiated customer needs as well as changing structures and more complex legal frameworks influence the global working environment of our students.

In the degree program B. Sc. Logistics students acquire broad professional competences and skills in each module, that enable them to apply and further develop the knowledge and methods of their field of expertise independently and in a practice-oriented manner on a scientifically sound basis.

Scientific and academic work

The degree program teaches students planning and organizational competences on a broad theoretical basis, which enables them to independently and practically apply and further develop scientific findings and methods for the optimization of the logistics chain. They will acquire the skills for team-oriented project management and for acting in a responsibly and professional way as well as the skills for a successful and scientifically based way of working. With the help of the assistance and guidance of lecturers from various subjects, graduates learn to apply academic methods to scientific work and to record the results of their research. The acquisition of scientific competences is embedded in the following modules: Fundamentals of Logistics, Project Management, English II, Economics, Quantitative Methods IV: Optimization and Disposal Logistics. Students acquire the necessary skills to grasp a scientific subject independently and successfully. This is a critical aspect for their studies as well as for their employability. The program addresses the difference between learning at school and working in a university context to make the students familiar with the research methods that are new to them. Guidelines help students to select a topic, find and evaluate suitable sources, structure their logical arguments, use an appropriate writing style, and cite sources correctly.

Social commitment

As a result of their studies, the graduates will have obtained knowledge of holistic process design and sustainable implementation geared to customer added value. In view of the above, the curriculum of B. Sc. Logistics provides the necessary professional qualifications and focuses on social, intercultural and ethical key qualifications. In addition, the international orientation of the Logistics program ensures our students' understanding of global economic contexts and intercultural characteristics. In this way we promote their mobility for the international labor market of the future.

Students acquire social and communicative skills such as self-management, learning and problem-solving techniques, verbal and written communication skills (presentations, documentation, conflict resolution, etc.), project management and teamwork both embedded in the subject modules and in special key competence modules. Especially in the modules Business Administration, Marketing, Economics, Introduction to International Logistics, Quantitative Methods III: Planning and Decision-Making and Quantitative Methods IV in Optimization as well as specifically in the modules Procurement, Production, Distribution and Waste Management Logistics, which are related to the phases of the flow of goods, students are explicitly encouraged to assume social responsibility. In addition, students are encouraged to use the English language, which is essential for economists in international business and in a highly globalized working environment.

2 Study Plan

Competence Areas and Modules	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.	5th Sem.	6th Sem.	7th Sem.	
	CP	CP	CP	CP	CP	CP	CP	CP
Business Administration / Economics / Law	**12**	12	12	6	0	0	0	42
Business Administration	6							**6**
Accounting	6							**6**
Marketing		6						**6**
Organization Theory		6						**6**
Private Law			6					**6**
Logistics Controlling			6					**6**
Economics				6				**6**
Quantitative Methods	**6**	**6**	**6**	**0**	**6**	**0**	**0**	24
Quantitative Methods I: Mathematics	6							**6**
Quantitative Methods II: Statistics		6						**6**
Quantitative Methods III: Planning and Decision-Making			6					**6**
Quantitative Methods IV: Optimization					6			**6**
Logistics Management	6	6	6	12	12	0	6	48
Processes and Functions								
Fundamentals of Logistics	6							**6**
Transport Logistics		6						**6**
Outsourcing							6	**6**
Information Management								
Methods of Business Process Modeling				6				**6**
Logistics IT and ERP Systems					6			**6**
Phase-Specific Specialization								
Distribution Logistics			6					**6**
Production Logistics				6				**6**
Procurement Logistics					6			**6**
Logistics Management (required electives)	0	0	0	6	0	0	6	12
Service Marketing and Management				1 x 6 CP				**6**
Introduction to International Logistics								
Logistics Consulting								
Planning of Logistics Centers								
Traffic Logistics								
Customs and International Trade Law								
Green Logistics								
Transfer Credits*								
Waste Management Logistics							1 x 6 CP	**6**
Fundamentals of Production Planning and Controlling								
Quality Management								
Investment Appraisal								
Multivariate Data Analysis								
Technical Systems and Digitization								
Transfer Credits*								
Soft Skills Development and Management Techniques	6	6	6	6	0	0	6	30
English I								**6**
Economy	3							
Accounting and Finance		3						
English II								**6**
Sales and Marketing			3					
Logistics				3				
Project Management								**6**
Project Management I	3							
Project Management II		3						
Communication and Presentation Techniques								**6**
Communication and Presentation Techniques I			3					
Communication and Presentation Techniques II				3				
Conflict Resolution and Negotiation Techniques							6	**6**
Internship Semester	0	0	0	0	**0**	30	0	**30**
Case Studies in Logistics Management	0	0	0	0	12	0	0	**12**
Project					12			**12**
Bachelor's Thesis	0	0	0	0	0	0	12	12
Bachelor's Thesis							12	12
Credit Points (CP)	30	30	30	30	30	30	30	**210**

*either in the 4th or 7th semester

3 Learning Outcomes of the Modules / Module Objectives

A classification scheme is assigned to the learning outcomes and learning objectives in the module descriptions of the program. This is essentially based on the taxonomy of learning objectives in the cognitive area according to BLOOM[1]. The focus is on learning objectives such as thinking, knowledge and problem solving.

The learning objectives are hierarchically categorized according to BLOOM[1] in six taxonomy levels (K1 to K6), whereby according to SITTE[2] each lower category is an element of the higher one. The levels of competence can be expressed by using specific verbs in the module descriptions, like for example according to MEYER[3] and are thereby manifested.

K1	**Knowledge**	Reproduction of knowledge, terms, definitions, procedures, contexts, etc. Typical verbs: *know, describe, present, report, name.*
K2	**Comprehension**	Transform knowledge and express it in the student's own words in a way that preserves its meaning. Typical verbs: *interpret, define, paraphrase, derive.*
K3	**Application**	Apply rules, methods or calculation procedures in concrete situations. Typical verbs: *perform, calculate, plan, design, elaborate*.
K4	**Analysis**	Decompose problems into elements in order to be able to work out principles, structures, commonalities or contradictions based on a comparison. Typical verbs: *select, categorize, examine, compare, analyze*.
K5	**Synthesis**	Combining individual elements into something new and complete. Typical verbs: *design, assign, conceive, construct, develop*.
K6	**Evaluation**	Making an evaluative judgment. Typical verbs: *judge, decide, give reasons, evaluate, classify*.

[1] BLOOM, B. S., Taxonomie von Lernzielen im kognitiven Bereich, Beltz Verlag, Weinheim, 1976.

[2] SITTE, W., Beiträge zur Didaktik des „Geographie und Wirtschaftskunde" Unterrichts. Wien, 564 pages, WOHLSCHLÄGL, H. (Ed.), Materialien zur Didaktik der Geographie und Wirtschaftskunde, vol. 16).

[3] MEYER, R. http://www.arbowis.ch/material/lp/Lehren/Zielformulierung_Verben.pdf, July 2012.

The following table illustrates how the learning objectives are accomplished in the study program.

Competence Levels of the Modules

Semester	Modules	K1	K2	K3	K4	K5	K6
1	Fundamentals of Logistics	■	■	■	■	■	■
1	Business Administration	■	■	■	■		
1	Accounting	■	■	■			
1	Quantitative Methods I: Mathematics	■	■	■	■		
1-2	Project Management I and II	■	■	■	■	■	
1-2	English I (Economy, Accounting and Finance)	■	■	■	■	■	
2	Marketing	■	■	■	■	■	■
2	Organization Theory	■	■	■	■	■	
2	Quantitative Methods II: Statistics	■	■	■	■		
2	Transport Logistics	■	■	■			
3	Distribution Logistics	■	■	■	■		
3	Logistics Controlling	■	■	■			
3	Private Law	■	■	■	■		
3	Quantitative Methods III: Planning and Decision-Making	■	■	■	■	■	■
3-4	Communication and Presentation Techniques I and II	■	■	■	■	■	
3-4	English II (Sales and Marketing, Logistics)	■	■	■	■	■	
4	Introduction to International Logistics	■	■	■	■		
4	Service Marketing and Management	■	■	■	■	■	
4	Logistics Consulting	■	■	■	■	■	■
4	Green Logistics	■	■	■	■		
4	Planning of Logistics Centers	■	■	■	■	■	■
4	Traffic Logistics	■	■	■	■		
4	Customs and International Trade Law	■	■	■			
4	Production Logistics	■	■	■	■		
4	Methods of Business Process Modeling	■	■	■	■	■	■
4	Economics	■	■	■	■		
5	Procurement Logistics	■	■	■			
5	Logistics IT and ERP systems	■	■	■			
5	Quantitative Methods IV: Optimization	■	■	■	■		
5	Project	■	■	■	■	■	■
6	Practical Transfer Credits	■	■	■	■	■	■
7	Conflict Resolution and Negotiation Techniques	■	■	■	■	■	■
7	Waste Management Logistics	■	■	■			
7	Fundamentals of Production Planning and Controlling	■	■	■			
7	Investment Appraisal	■	■	■	■	■	■
7	Outsourcing	■	■	■	■	■	■
7	Quality Management	■	■	■	■		
7	Multivariate Data Analysis	■	■	■	■		
7	Technical Systems and Digitization	■	■	■	■		
7	Bachelor's Thesis	■	■	■	■	■	■

4 Modules

Business Administration / Economics / Law

4.1 Business Administration

Module number:	1010
Module title in German:	Betriebswirtschaftslehre
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	1st semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. Zelal Ates
Lecturer:	Rowena Arzt (associate lecturer)
Learning outcome:	At the end of the semester students are able to formulate and analyze economic questions and interrelationships on a technical basis by applying and analyzing the knowledge gained in the lecture on the basis of specific and sometimes self-selected cases and by knowing how to present results in order to be able to successfully collaborate with different functional areas later on in the internship semester.
Module content:	• **Companies and management** o companies and markets o entrepreneurship and corporate governance o corporate environments and corporate development o corporate success and liquidity as target figures • **Basic operational functions** o investment and financing management o marketing management o procurement management o production management o human resources management o business accounting o logistics management • **Strategies, structures and systems** o strategic management and innovation management o organization and management systems
Teaching and learning methods:	seminar-based lecture
Assessment method(s):	examination (100%) Processing a case study and presentation of its results as well as the selection, discussion and presentation of an article from the management press with a business case study - each in group work - are prerequisites for the admission to the examination.
Workload: (25 to 30 h ≙ 1 ECTS credit):	180 h
courses	64 h lecture

(4 semester hours per week)	
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	—
Mandatory prerequisites:	—
Recommended literature:	Eisenführ, F./Theuvsen, L. (2004): Einführung in die Betriebswirtschaftslehre, 4th edtion, Stuttgart: Poeschel 2004. Thommen, J.-P./Achleitner, A.-K./Gilbert, D. U./Hachmeister, D./Kaiser, G. (2017): Allgemeine Betriebswirtschaftslehre: Umfassende Einführung aus managementorientierter Sicht, 8th ed., Wiesbaden: Springer Gabler 2017. Wöhe, G./Döring, U./Brösel, G. (2016): Einführung in die Allgemeine Betriebswirtschaftslehre, 26th ed., Munich: Vahlen 2016. Straub, T. (2014): Einführung in die Allgemeine Betriebswirtschaftslehre, Munich: Pearson Deutschland. Vahs, D./Schäfer-Kunz, J. (2015): Einführung in die Betriebswirtschaftslehre, 7th ed., Stuttgart: Schäffer-Poeschel. Hutzschenreuter, T.: Allgemeine Betriebswirtschaftslehre – Grundlagen mit zahlreichen Praxisbeispielen, 6th ed., Wiesbaden: Gabler 2015. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2022

4.2 Accounting

Module number:	1020
Module title in German:	Rechnungswesen
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	1st semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. Thomas Krupp
Lecturer:	Prof. Dr. Kristian Foit (associate lecturer)
Learning outcome:	The students learn about the functions and systems of accounting as an information generator and can apply the instruments to operational problems, by • identifying a company's cost structure, • carrying out the process of cost accounting (cost type, cost center, cost unit accounting) and full and partial cost accounting, • classifying the aim, purpose and components of the annual financial statements (German Commercial Code) as well as • assessing the value of business events and show them in the balance sheet in order to fulfill business planning, decision-making and control tasks (e.g. with regard to price and product policy) as well as documentation requirements with information support.
Module content:	**Accounting as an information system,** **fundamentals of internal accounting (cost and performance accounting):** • cost accounting and its tasks within the operational accounting system • basic concepts of cost and performance accounting • embedding the cost accounting in the chart of accounts • principles of cost accounting • cost type accounting • cost center accounting • unit-of-output costing/calculation • cost unit period accounting/short-term income statement/operating income statement **Fundamentals of external accounting:** • introduction, aim and purpose of the annual financial statements • influence of the legal form and size of the company (legal system) • significance of the inventory for the annual financial statements • principles of proper accounting • basic approach (accounting) • amount recognized according to (measurement, initial measurement acquisition and production costs) **Balance sheet**
Teaching and learning methods:	seminar-based teaching
Assessment method(s):	examination
Workload	180 h

(25 to 30 h ≙ 1 ECTS credit):	
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	Business Administration
Mandatory prerequisites:	the module Fundamentals of Accounting (module of the Faculty of Business, Economics and Law)
Recommended literature:	Grundlagen des Internen Rechnungswesens Friedl, G./Hofmann, C./Pedell, B.: Kostenrechnung, 3rd ed., Vahlen, 2017 Fischbach, S.: Grundlagen der Kostenrechnung, 7th ed., Vahlen, 2018 Wöhe, G./ Döring, U.: Einführung in die Allgemeine Betriebswirtschaft, 25th ed., Vahlen, 2013. Däumler, K.-D./Grabe, J.: Kostenrechnung 1-2, 11th ed., nwb Verlag, 2013. Lorberg.D./Foit, K. Kostenrechnung, Kiehl Verlag, 2015. Grundlagen des externen Rechnungswesens Handelsgesetzbuch HGB, Beck-Texte, Deutscher Taschenbuchverlag, latest ed.. Baetge, J./Kirsch, H.-J./Thiele, St.: Bilanzen, 15th revised ed., IDW-Verlag, 2019. Wulf, I. /Müller, St.: Bilanztraining, 15th ed., Haufe-Lexware, 2016. Quick, R./Wolz, M.: Bilanzierung in Fällen. Grundlagen, Aufgaben und Lösungen nach HGB und IFRS, 6th revised ed., Schäffer-Poeschel Verlag, 2016. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2022

4.3 Private Law

Module number:	1040
Module title in German:	Privatrecht
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	3rd semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. Friedrich Klein-Blenkers, Prof. Dr. Bernd Eckardt
Lecturer:	Dustin Bohrer (associate lecturer)
Learning outcome:	At the end of the semester students are able to reproduce and explain the basics of the BGB (German Civil Code), HGB and ProdHaftG (product liability code) as well as apply legal bases of claims to facts ("cases") by selecting legal information (constituent elements) from legal texts and examining whether these are fulfilled by facts (subsuming) in order to analyze in an operational context whether they can solve a legally relevant issue themselves in the context of a logistics activity or whether legal advice (in-house, external) is required.
Module content:	**Basic principles of the BGB (AT (general part), debt law AT and BT (special part), HGB**, in particular • persons (natural, legal, consumer, entrepreneur, merchant) • representation (legal transactions, corporate bodies, legal) • conclusion of contract • general terms and conditions (AGB) • contract types • rights and obligations arising from contracts • fulfillment of contracts • performance problems • unjustified enrichment • unauthorized actions and liability for risks (with product liability)
Teaching and learning methods:	seminar-based lecture
Assessment method(s):	examination
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h
exam preparation:	—

Recommended prerequisites:	—
Mandatory prerequisites:	—
Recommended literature:	Legal texts (latest ed.s - alternatives): Güllemann, Dirk (Hg.) (2020): Wichtige Gesetze des Wirtschaftsprivatrechts. 21th ed., as of 1.1.2020. Herne: NWB Verlag GmbH et Co. KG (NWB Textausgabe) oder Zivilrecht, Wirtschaftsrecht (2020). 28th ed., as of August 20, 2019. Baden-Baden: Nomos (Nomos Gesetze) or Döring, Ulrich et al. (2020): Aktuelle Wirtschaftsgesetze 2020: die wichtigsten Wirtschaftsgesetze für Studierende, Ed. Vahlens Textausgaben. 12th ed., October 01, 2019. Munich: Verlag Franz Vahlen Textbooks (latest ed.): Müssig, Peter (2019): Wirtschaftsprivatrecht: rechtliche Grundlagen wirtschaftlichen Handelns, 21th new revised ed.. Heidelberg: C.F. Müller alternative: Führich, Ernst (2014): Wirtschaftsprivatrecht: Bürgerliches Recht, Handelsrecht, Gesellschaftsrecht, 12th updated and revised ed.. Munich: Vahlen Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2022

4.4 Marketing

Module number:	1126
Module title in German:	Marketing
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	2nd semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr. Zelal Ates
Lecturer:	Prof. Dr. Zelal Ates
Learning outcome:	At the end of the semester students are able to make target-oriented marketing decisions in consumer and capital goods markets based on information and analysis by obtaining and analyzing necessary external company information, developing the marketing strategy and deriving the coordinated use of marketing instruments in order to structure the product range, prices, communication and distribution in a market-oriented way.
Module content:	This course is aimed at providing the fundamentals for a theoretically sound yet practical academic marketing education. In accordance with the specific study objectives of the program, students are to be provided with facts, methodological knowledge and, above all, a broad understanding of the basic principles of marketing management for consumer and capital goods suppliers. The focus is on the importance and position of marketing within the company, the strategic fundamentals of marketing, the basic principles of the buying behavior of consumers and organizations, data collection for decision support in marketing, and the marketing mix. Within the marketing mix, the essential fundamentals of marketing instruments, i.e. product policy, pricing policy, communication policy and distribution policy are discussed.
Teaching and learning methods:	seminar-based lecture Self-study: preparation based on the bibliography, post-lecture preparation, literature research and study; exercises; presentation of the results.
Assessment method(s):	examination (80%) The completion of a marketing or market research project in group work (20%) is a graded prerequisite for participation in the exam.
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	—
Mandatory prerequisites:	—

Recommended literature:

General:
Bruhn, M. (2016): Marketing: Grundlagen für Studium und Praxis, 13th ed., Wiesbaden.

Homburg, C. (2017): Grundlagen des Marketingmanagements: Einführung in Strategie, Instrumente, Umsetzung und Unternehmensführung, 5th ed., Wiesbaden.

Kotler, P./Lane Keller, K./Opresenik, M. O. (2017): Marketing-Management: Konzepte – Instrumente – Unternehmensfallstudien, 15th ed., Hallbergmoos.

Meffert, H./Burmann, C./Kirchgeorg, M. (2015): Marketing: Grundlagen marktorientierter Unternehmensführung, Wiesbaden.

Steffenhagen, H. (2008), Marketing: Eine Einführung, Stuttgart.

Walsh, G./Deseniss, A./Kilian, T. (2013): Marketing: Eine Einführung auf der Grundlage von Case Studies, 2nd ed., Wiesbaden.

Consumer Behavior:
Ajzen, I./Fishbein, M. (1978), Einstellungen und normative Variablen als Prediktoren von spezifischem Verhalten, in: Stroebe, W. (Ed.), Sozialpsychologie, vol. 1, Darmstadt, 404-444.

Aronson, E./Wilson, T. D./Akert, R. M. (2008), Sozialpsychologie, 6th ed., Munich.

Festinger, L. (1957, auf Deutsch: 1978), Theorie der kognitiven Dissonanz, Bern.

Foscht, T./Swoboda, B. (2007), Käuferverhalten, 3rd ed., Wiesbaden.

Hollensen, S. (2014), Marketing Management – A Relationship Approach, 3rd ed., London et al.

Hoyer, W. D. /MacInnis, D. J. (2012), Consumer Behavior, 6th ed., Boston/New York.

Kroeber-Riel, W./Gröppel-Klein, A. (2013), Konsumentenverhalten, 13th ed., Munich.

Maslow, A. H. (1970), Motivation and Personality, Princeton.

Maslow, A. H. (1975), Motivation and Personality, in: Levine, F. M. (Ed..), Theoretical Readings in Motivation: Perspectives on Human Behavior, Chicago.

Rheinberg, F. (2008), Motivation, 7th ed., Stuttgart.

Robinson, P. J. /Faris, C. W./Wind, Y. (1967), Industrial Buying and Creative Marketing, Boston, Mass.

Trommsdorff, V./Teichert, Th. (2011), Konsumentenverhalten, 8th ed., Stuttgart.

Webster, F. E. Jr. /Wind, Y. (1972), Organizational Buying Behavior, Englewood Cliffs.

Market Research:
Böhler, H. (2004), Marktforschung, 3rd ed., Stuttgart.

Hammann, P./Erichson, B. (2006), Marktforschung, 5th ed., Stuttgart.

Homburg, Ch. /Daum, D. (1997), Marktorientiertes Kostenmanagement, Frankfurt a.M., 105-182.

Homburg, Ch. /Herrmann, A., Pflesser, C., Klarmann, M. (2014), Methoden der Datenanalyse im Überblick, in: Herrmann, A., Homburg, Ch., Klarmann, M. (Ed.), Handbuch Marktforschung: Methoden – Anwendungen - Praxisbeispiele, 3rd ed., Wiesbaden, 151-173.

Malhotra, N. (2009), Marketing Research – An Applied Orientation, 6th ed., Upper Saddle River, NJ.

Meffert, H. (1992), Marketingforschung und Käuferverhalten, 2nd ed., Wiesbaden.

Tom, G. /Barnet, T. (1987), Cueing the Consumer – the role of salient cues in Consumer perception, Journal of Consumer Marketing, 4, 2, 23-29.

Product Policy:
Aschhoff, B./Doherr, T./Ebersberger, B./Peters, B./Rammer, C./Schmidt, T. (2008), Innovation behavior of the German economy, ZEW, Mannheim.

Brockhoff, M./Hauschildt, J. (1993), Interface management – coordination without hierarchy, p. 396-403.

Bruhn, M. (1995), Markenstrategien, in: Tietz, B. (Ed.), HWM, 2nd ed., Stuttgart, p. 1445-1459.

Esch, F.-R./Wicke, A./Rempel, J. E. (2005), Herausforderungen und Aufgaben des Markenmanagements, in: Esch, F.-R. (Ed.), Moderne Markenführung, 4th ed., Wiesbaden, p 3-55.

Grosse, D. (2009), Innovations- und Projektmanagement, Frankfurt am Main.

Hauschildt, J./Salomo, S./Schultz, C./Kock, A. (2016), Innovationsmanagement, 6th ed., Munich.

Rogers, E. (1962), Diffusion of Innovations, New York.

Sattler, H./Völckner, F. (2013), Markenpolitik, 3rd ed., Stuttgart.

Pricing Policy:
Becker, J. (2012), Marketing-Konzeption: Grundlagen des Ziel-strategischen und operativen Marketing-Managements, 10th ed., Munich.

Danaher, P./Brodie, R. (2000), Understanding the Characteristics of Price Elasticities for Frequently Purchased Packaged Goods, Journal of Marketing Management, 16,8, 917-936.

Diller, H. (2007), Preispolitik, 4th ed., Stuttgart.

Fassnacht, M. (1996), Preisdifferenzierung von Dienstleistungen - Implementationsformen und Determinanten, Wiesbaden.

Simon, H./Fassnacht, M. (2016), Preismanagement, 4th ed., Wiesbaden.

Communication Policy
Bruhn, M. (2014), Unternehmens- und Marketingkommunikation: Handbuch für ein integriertes Kommunikationsmanagement, 3rd ed., Munich.

Bruhn, M. (2015), Kommunikationspolitik: Systematischer Einsatz der Kommunikation für Unternehmen, 8th ed., Munich.

Kroeber-Riel, W. (1993), Bildkommunikation: Imagerystrategien für die Werbung, Munich.

Kroeber-Riel, W./Esch, F.-R. (2015), Strategie und Technik der Werbung: Verhaltenswissenschaftliche Ansätze und neurowissenschaftliche Erkenntnisse, 8th ed., Stuttgart.

Ronneberger, F./Rühl, M. (1992), Theorie der Public Relations: Ein Entwurf, Opladen.

Distribution Policy:
Ahlert, D. (1996), Distributionspolitik, 3rd ed., Stuttgart – Jena.

Homburg, Ch. /Schäfer, H., Schneider, J. (2016), Sales Excellence – Vertriebsmanagement mit System, 8th ed., Wiesbaden.

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Benkenstein, M./Güthoff, J. (1996), Typologisierung von Dienstleistungen, Zeitschrift für Betriebswirtschaft, 66, 12, 1493-1510.

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Meffert, H./Bruhn, M. (2015), Dienstleistungsmarketing: Grundlagen, Konzepte, Methoden. Mit Fallstudien, 8th ed., Wiesbaden.

Schmenner, R. (1992), How Can Service Businesses Survive and Prosper, in: Lovelock, C. (Ed.): Managing Services, Englewood Cliffs, 31-42.

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Parasuraman, A. /Zeithaml, V.A./Berry, L.L. (1988), SERVQUAL. A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality, Journal of Retailing, 64, 1, 12-40.

Weiber, R./Kleinaltenkamp, M. (2013), Business- und Dienstleistungsmarketing: Die Vermarktung integrativ erstellter Leistungsbündel, Stuttgart.

Capital Goods Marketing:
Backhaus, K. /Voeth, M. (2014), Industriegütermarketing, 10th ed., Munich.

Homburg, Ch. /Garbe, B. (1996a), Industrielle Dienstleistungen - Bestandsaufnahme und Entwicklungsrichtungen, Zeitschrift für Betriebswirtschaft, 66, 3, 253-282.

Homburg, Ch. /Garbe, B. (1996b), Industrielle Dienstleistungen - lukrativ, aber schwer zu meistern, Harvard Business Manager, 18, 1, 68-75.

Homburg, Ch. /Totzek, D. (2011), Preismanagement auf Business-to-Business-Märkten, Wiesbaden

Kleinaltenkamp, M. (1997), Business-to-Business-Marketing, in: Gabler Wirtschafts-Lexikon, 14th ed., vol 1, A-E, Wiesbaden, 753-762.

Plinke, W. (2000), Grundkonzeptionen des industriellen Marketing-Managements, in: Kleinalten-kamp, M., Plinke, W. (Ed.), Technischer Vertrieb: Grundlagen des Business-to-Business Marketing, 2nd ed., Berlin, 101-168.

Werani, T. (2012), Business-to-Business-Marketing: Ein wertbasierter Ansatz, Stuttgart

Further literature recommendations will be communicated during the lecture.

Use of the module in other programs:	—
Particularities:	—
Last update:	02/2022

4.5 Business Theory

Module number:	1030
Module title in German:	Betriebsorganisation
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	2nd semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr.-Ing. Christoph S. Zoller
Lecturer:	Falk Steinhoff (associate lecturer)
Learning outcome:	At the end of the semester students should be able to critically evaluate self-developed organizational and process improvements regarding problems in the direct and indirect corporate area by internalizing selected lean methods from the areas of production, administration and development and examining them in a quiz in order to successfully initiate or accompany change processes within the company organization later on in everyday working life.
Module content:	• fundamental concepts of business organization, • presentation of the vision of a Lean company, • problem solving techniques and strategies, • effects of Lean Management methods, • overview of the central Lean principles and application possibilities, • selected Lean Management methods for the areas of production, administration and development to design information flows and communication, • planning, control and communication of successful change processes.
Teaching and learning methods:	lecture, exercise, voluntary practical training
Assessment method(s):	The grade of the module is based on 5 equally weighted tests with, among others, multiple choice questions.
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	32 h lecture 16 h exercise 16 h practical training 64 h
preparation and follow-up:	40 h lecture 36 h exercise 76 h
exam preparation:	40 h
Recommended prerequisites:	—
Mandatory prerequisites:	—

Recommended literature:	Slide script is handed out during the lecture. Bergmann, R./Garrecht, M.: Organisation und Projektmanagement, Heidelberg, 2008. Womack, J. P. /Jones, D. T.: Lean Thinking. Ballast abwerfen, Unternehmensgewinn steigern, Frankfurt, 2013. Saheb, K.: Lean Administration, Aachen, 2014. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	03/2022

4.6 Logistics Controlling

Module number:	1120
Module title in German:	Logistik-Controlling
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	3rd semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. Thomas Krupp
Lecturer:	Prof. Dr. Thomas Krupp
Learning outcome:	At the end of the semester students are able to apply the fundamentals of operational as well as strategic corporate planning and management and define the essential terms in this context by differentiating between the individual planning models and applying them in a situation-specific manner and by using the instruments of strategic corporate management and operational controlling in order to provide a rational basis for decision-making in the further course of study, especially during the internship semester, the practical project and the bachelor thesis, but also in professional life.
Module content:	• fundamentals of logistics controlling • strategic logistics controlling • recording and reporting of logistics services and revenues • recording and reporting of logistics costs • reporting for logistics • calculation of logistics costs • supply chain controlling • project-related logistics controlling
Teaching and learning methods:	seminar-based teaching
Assessment method(s):	examination
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	Business Administration and Accounting
Mandatory prerequisites:	—
Recommended literature:	Alter, R.: „Strategisches Controlling – Unterstützung des strategischen Managements“, 2nd rev. ed., Munich 2013.

	Delfmann, W. und Reihlen, M.: „Controlling von Logistikprozessen“, Stuttgart 2003. Horváth, P., Gleich, R., Seiter, M.: Controlling. 13th completely rev. ed., Munich 2015. Jung, H.: „Controlling“, 4th ed., Munich 2014. Schneider, C. [Eds.]: „Controlling für Logistikdienstleister: Konzepte - Instrumente - Anwendungsbeispiele - Trends “, Hamburg 2013. Weber, J. et. al.: The CFO as Advanced Navigator, Advanced Controlling, Weinheim 2008. Weber, J. und Wallenburg, C.: Logistik- und Supply Chain Controlling, 6th compl. rev. ed., Stuttgart 2010. Weber, J. und Schäffer, U.: „Einführung in das Controlling“, 15th revised and updated ed., Stuttgart 2016. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2022

4.7 Economics

Module number:	1050
Module title in German:	Volkswirtschaftslehre
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	4th semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr. Marc Kastner
Lecturer:	Dr. Michael Jahr (associate lecturer)
Learning outcome:	At the end of the semester, students will be able to deal with the fundamental micro- and macroeconomic theories for the analysis of economic issues and apply them to real economic problems. They are able to describe the behavior of players in different market forms and to illustrate the influence of economic policy measures on the market outcome. They can also explain the dynamics of factor markets and assess the development of economies. The module enables students to better understand economic policy contexts in order to be able to make informed market decisions as junior managers.
Module content:	1. introduction to economics 2. supply and demand 3. markets, efficiency and welfare 4. corporate behavior and market structures 5. national accounts 6. factor and financial markets 7. monetary theory and monetary policy 8. growth and economy
Teaching and learning methods:	seminar-based teaching
Assessment method(s):	examination
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	Quantitative Methods I to III
Mandatory prerequisites:	—
Recommended literature:	Herrmann, M.: Arbeitsbuch Grundzüge der Volkswirtschaftslehre, 5th ed., Stuttgart, Schäffer-Poeschel, 2016. Krugman, P., Wells, R.: Volkswirtschaftslehre, 2nd ed., Stuttgart, Schäffer-Poeschel, 2017. Mankiw, N. G./Taylor, M. P.: Grundzüge der Volkswirtschaftslehre, 7th ed., Stuttgart, Schäffer-Poeschel, 2018. Samuelson, P. A./Nordhaus, W. D.: Volkswirtschaftslehre, 5th ed., Munich, FBV, 2016.

	Vogl., B., Lorberg, D.: Volkswirtschaftslehre: Grundlagen und Mikroökonomie, 2nd ed., Herne, Kiehl, 2018. Vogl., B., Lorberg, D.: Volkswirtschaftslehre: Macroeconomics, 2nd ed., Herne, Kiehl, 2020. Further literature recommendations will be communicated during the lectures.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2023

Quantitative Methods

4.8 Quantitative Methods I: Mathematics

Module number:	2010
Module title in German:	Quantitative Methoden I: Mathematik
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	1st semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. Marc Kastner
Lecturer:	Prof. Dr. Marc Kastner
Learning outcome:	The students are able to formulate, model and solve economic questions and problems mathematically by applying methods and models of economic mathematics in order to confidently master business and economic relationships during the course of their studies and as junior managers.
Module content:	1. logic and set theory 2. arithmetic and combinatorics 3. linear algebra 4. real functions 5. differential calculus 6. integral calculus 7. linear optimization
Teaching and learning methods:	on-site teaching (lecture) learning in small groups (exercise)
Assessment method(s):	examination
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	preparatory course/bridging course Mathematics for Economists
Mandatory prerequisites:	—
Recommended literature:	Arrenberg, J.: Finanzmathematik. Lehrbuch mit Übungen, 3rd ed., Munich,Oldenbourg, 2015. Arrenberg, J.: Wirtschaftsmathematik für Bachelor, 6th ed., Kostanz, UVK, 2020. Chiang, A. C./Wainwright, K./Nitsch, H.: Mathematik für Ökonomen. Grundlagen, Methoden und Anwendungen, Munich, Vahlen, 2011.

	Haack, B., Tippe, U., Stobernack, M., Wendler, T., Mathematik für Wirtschaftswissenschaftler, Berlin, Springer, 2017 Kastner, M.: Mathematik für Wirtschaftswissenschaftler. Lehrbuch mit begleitender Online-Lernumgebung, 2nd ed., Herne, 2021. Merz, M./Wüthrich, M. V.: Mathematik für Wirtschaftswissenschaftler. Die Einführung mit vielen ökonomischen Beispielen, Munich, Vahlen, 2013. Merz, M.: Übungsbuch zur Mathematik für Wirtschaftswissenschaftler. 450 Klausur- und Übungsaufgaben mit ausführlichen Lösungen, Munich, Vahlen, 2013. Ohse, D.: Mathematik für Wirtschaftswissenschaftler I – Analysis, 6th ed., Munich, Vahlen, 2004. Ohse, D.: Mathematik für Wirtschaftswissenschaftler II – Lineare Wirtschaftsalgebra, 5th ed., Munich, Vahlen, 2005. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2023

4.9 Quantitative Methods II: Statistics

Module number:	2020
Module title in German:	Quantitative Methoden II: Statistik
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	2nd semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr. Marc Kastner
Lecturer:	Prof. Dr. Marc Kastner
Learning outcome:	The students are able to analyze economic issues and problems with statistical methods and to point out connections by applying methods and models of descriptive statistics, probability calculation and statistical inference in order to explore empirical relationships during the course of their studies and as junior managers. Students will be able to model and solve practical decision-making situations using the “Entscheidungsnavi” (decision gps).
Module content:	1. what it is about 2. analysis of one-dimensional data 3. analysis of two-dimensional data 4. probability calculation 5. random variables and their distribution 6. inference statistics
Teaching and learning methods:	on-site teaching (lecture) learning in small groups (exercise)
Assessment method(s):	examination
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	Quantitative Methods I
Mandatory prerequisites:	—
Recommended literature:	Arrenberg, J.: Wirtschaftsstatistik für Bachelor, 4th ed., Kostanz, 2020. Auer, B./Rottmann, H.: Statistik und Ökonometrie für Wirtschaftswissenschaftler, 4th ed., Wiesbaden, 2020. Bomsdorf, E.: Deskriptive Statistik, 14th ed., Lohmar, 2013.

	Bomsdorf, E.: Wahrscheinlichkeitsrechnung und Statistische Inferenz, 8th ed., Lohmar, 2002. Kastner, M.: Statistik. Lehrbuch mit begleitender Online-Lernumgebung, 2nd ed., Herne, 2021. Mosler, K./Schmid, F.: Beschreibende Statistik und Wirtschaftsstatistik, 4th ed., Berlin, 2009. Mosler, K./Schmid, F.: Wahrscheinlichkeitsrechnung und schließende Statistik, 4th ed., Berlin, 2011. Oestreich, M./Romberg, O.: Keine Panik vor Statistik!, 6th ed., Wiesbaden, 2018. Schira, J.: Statistische Methoden der VWL und BWL, 6th ed., Munich, 2021. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2023

4.10 Quantitative Methods III: Planning and Decision-Making

Module number:	2030
Module title in German:	Quantitative Methoden III: Planung und Entscheidung
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	3rd semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. Marc Kastner
Lecturer:	Prof. Dr. Marc Kastner
Learning outcome:	The students are able to analyze and solve general and especially problems in decision-making in business management by applying theoretical methods and models of decision-making in a situation-oriented manner and evaluating their advantages for problem solving in order to make the best possible decisions as future junior managers.
Module content:	1. structuring of the decision situation: formulation of the decision question, definition of fundamental objectives, identification of alternative actions, visualization of the decision problem. 2. development of an impact model: estimation and measurement of outcomes, consideration of uncertainties, avoidance of systematic biases 3. evaluation and decision: mapping preferences into utility functions, identifying tradeoffs for goal weighting, ranking alternatives and evaluating the decision, multilevel decision situations 4. problem solving with incomplete information: performing sensitivity analysis, dominance checking in the presence of incomplete information
Teaching and learning methods:	seminar-based teaching
Assessment method(s):	Examination Optionally, in addition to the exam, a project can be processed with the ENTSCHEIDUNGSNAVI.
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	Quantitative Methods I and II
Mandatory prerequisites:	—
Recommended literature:	Adam, D.: Planung und Entscheidung, 4th ed., Wiesbaden, Gabler, 1996.

	Clemen, R. T. /Reilly, T.: Making Hard Decisions with Decision Tools, 3rd ed., Pacific Grove, Duxbury, 2013. Eisenführ, F./Langer, T./Weber, M. (Ed.): Fallstudien zu rationalem Entscheiden, Berlin, Springer, 2001. Eisenführ, F./Weber, M./Langer, T.: Rationales Entscheiden, 5th ed., Berlin, Springer, 2010. Gigerenzer, G.: Risiko. Wie man die richtigen Entscheidungen trifft, Munich, Bertelsmann, 2013. Hammond, J. S. /Keeney, R. L. /Raiffa, H.: Smart Choices, Boston, Harvard Business School Press, 1999. Kahneman, D.: Schnelles Denken, langsames Denken, Munich, Siedler, 2012. Klein, R./Scholl, A.: Planung und Entscheidung, 2nd ed., Munich, Vahlen, 2011. Nitzsch, R. von: Entscheidungslehre, 10th ed., Aachen, Mainz, 2019. Nitzsch, R. von, Methling, F.: Reflektiert entscheiden – Kompetent mit Kopf und Bauch, Frankfurt 2021 Ragsdale, C. T.: Spreadsheet Modeling and Decision Analysis, 8th ed., Mason, Cengage, 2018. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2023

4.11 Quantitative Methods IV: Optimization

Module number:	2040
Module title in German:	Quantitative Methoden IV: Optimierung
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	5th semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. Marc Kastner
Lecturer:	Dr. Julia Hilger (associate lecturer)
Learning outcome:	The students are able to select procedures and models of Operation Research according to the situation and to assess their advantageousness for problem solving by analyzing and modeling business management and logistical optimization problems in order to make optimal decisions in a company as future junior managers.
Module content:	1. introduction to quantitative optimization 2. strategic aspects in logistics 3. design of the infrastructure of a production system 4. operative production planning and controlling 5. logistical processes 6. further application examples
Teaching and learning methods:	seminar-based teaching
Assessment method(s):	examination
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	Quantitative Methods I to III
Mandatory prerequisites:	—
Recommended literature:	Berens, W./Delfmann, W./Schmitting, W.: Quantitative Planung, 4th ed., Stuttgart, Schäffer-Poeschel, 2004. Clemen, R. T., Reilly, T.: Making Hard Decisions with Decision Tools, 3rd ed., Mason (South Western) 2014. Günther, H., Tempelmeier, H.: Supply Chain Analytics: Operations Management und Logistik, 13th ed., Norderstedt, Books on Demand, 2020. Günther, H., Tempelmeier, H.: Übungsbuch Supply Chain Analytics: Operations Management und Logistik, 10th ed., Norderstedt, Books on Demand, 2020. Heizer, J. /Render, B.: Operations Management, 10th ed., Harlow, Pearson, 2016.

	Lasch, R., Janker, C. G.: Übungsbuch Logistik, 3rd ed., Wiesbaden, Gabler, 2013. Lasch, R., Schulte, G.: Quantitative Logistik-Fallstudien, 3rd ed., Wiesbaden, Gabler, 2011. Ragsdale, C. T.: Spreadsheet Modeling and Decision Analysis, 8th ed., Mason, Cengage, 2018. Tempelmeier, H.: Analytics in Supply Chain Management und Produktion: Übungen und Mini-Fallstudien, 7th ed., Norderstedt, Books on demand, 2020. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2023

Logistics Management – Processes and Functions

4.12 Fundamentals of Logistics

Module number:	3110
Module title in German:	Grundlagen Logistik
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	1st semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. rer. pol. Helmut Schulte Herbrüggen
Lecturer:	Prof. Dr. rer. pol. Helmut Schulte Herbrüggen
Learning outcome:	After the successful completion of the module “Fundamentals of Logistics”, students are able to plan and realize a goal-oriented implementation of basic logistical optimization measures, especially oriented on goals such as quality, costs, deadlines and throughput times, environmental protection, ethics, service, etc, by carrying out careful ACTUAL analyses in teams, developing, comparing and selecting logistical TARGET concepts based on these analyses, designing appropriate measures and presenting them in writing and in oral presentations in order to be able to implement practical solutions for logistics problems through 'lean' customer-focused concepts.
Module content:	
14 weeks	**Interactive lectures** to teach theoretical and practical basic knowledge of logistics: • basic concepts and principles of logistics • international aspects of logistics • lean production/ lean management • SCOR model • functional logistics systems • conceptual configuration of lean logistics systems • technical systems in logistics systems • integrative organization of logistics systems (including intercultural and ethical aspects) • Logistics Controlling • current innovations in logistics, in particular customer-oriented configuration in the sense of "Lean Logistics" • teaching the fundamentals of scientific work **Exercises** on the lecture content (integrated into the lectures)
2 weeks	**Internships in the model factory** on several days (groups of 16-17 students) **Project preparation (integrated into the internship days):** • assignment of project topics to small groups (teamwork) • general literature references • introduction to scientific work (structure, method of citation) • establish a milestone plan

accompanying the lecture	**Project realization:** • analysis of logistics using the model factory as an example • conceptual development of TARGET concepts in the sense of "lean" • elaboration of concrete action plans that can be implemented Milestone oriented short presentation of the project status and coordination of the further procedure to ensure stringent solution approaches (in consultation hours or in the interactive lectures).
in the last two weeks of lectures	**Presentation of results:** presentation of the project reports final presentation and questions or discussion on the project results
Teaching and learning methods:	interactive lectures, exercises in which essential lecture contents are repeated and deepened, visits to the institute's own model factory. project work on logistics (actual analyses, target concepts, action plans).
Assessment method(s):	project reports (60%) presentations including survey and discussion (40%) **Compulsory attendance:** For the practical training in the subject 'Fundamentals of Logistics', participation is compulsory due to the project-based teaching. Students who do not fully participate in the practical training can only complete the module 'Fundamentals of Logistics' again in the following year.
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	48 h lectures/exercises 16 h practical internship in the model factory 64 h
preparation and follow-up:	96 h
presentation preparation:	20 h
Recommended prerequisites:	—
Mandatory prerequisites:	—
Recommended literature:	Slide scripts handed out in the lecture as copy templates, exercises. Werner, H.: Supply Chain Management. Grundlagen, Strategien, Instrumente und Controlling, latest ed., Wiesbaden. Also available as an e-book. Poluha, R. G.: Quintessenz des Supply Chain Managements. Was Sie wirklich über Ihre Prozesse in Beschaffung, Fertigung, Lagerung und Logistik wissen müssen, latest ed., Berlin. Also available as an e-book. Chopra, S./Meindl, P.: Supply Chain Management. Strategy, Management and Operation, Upper Saddle River, latest ed., New Jersey. Piontek, J.: Bausteine des Logistikmanagements. Supply Chain Management. E-Logistics. Logistikcontrolling, latest ed., Herne. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	09/2022

4.13 Transport Logistics

Module number:	3120
Module title in German:	Transportlogistik
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	2nd semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr. Thomas Krupp
Lecturer:	Prof. Dr. Thomas Krupp
Learning outcome:	At the end of the semester students should be able understand and implement the principles of national and international transport and traffic logistics services by being able to analyze and apply the methods and principles of the individual management areas and transport management issues in order to independently solve the problems of transport logistics as a central logistical function for linking the elements of the supply chain in the further course of studies and in professional practice.
Module content:	**Provision of services by national and international transport and traffic companies** • pack and mark • truck transports • air, rail and sea transport **Areas of service provision** • transport network and transport management • capacity management • information and communication management • fleet management • container and load management • quality and performance management
Teaching and learning methods:	presentation by the lecturer, dialog with the students, guest lecturers
Assessment method(s):	examination
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	—
Mandatory prerequisites:	—
Recommended literature:	Obligatory:

	PowerPoint presentation (script) of the lecturer with tasks and case studies Recommended: Aberle, G.: Transportwirtschaft. Einzelwirtschaftliche und gesamtwirtschaftliche Grundlagen, 5th revised and extended ed., Munich/Wien 2009. Buchholz, J./Clausen, U./Vastag, A. (Ed.): Handbuch der Verkehrslogistik, Heidelberg 1998. Clausen, U., Geiger, C. [Ed.]: „Verkehrs- und Transportlogistik“, Berlin: Springer Vieweg, 2nd ed., 2013. Corsten, H.: Dienstleistungsmanagement, 6th ed., Munich 2015. Gudehus, T.: „Logistik 2 - Netzwerke, Systeme und Lieferketten“, Berlin: Springer Vieweg, 4th ed. 2012. Ihde, G. B.: Transport, Verkehr, Logistik. Gesamtwirtschaftliche Aspekte und einzelwirtschaftliche Handhabung, 3rd compl. rev. and ext. ed., Munich 2001. Kille, C., Schwemmer, M.: „Top 100 in European Transport and Logistics Services 2013/2014”, Hamburg: DVV Media Group, 2013. Kille, C., Schwemmer, M.: „Die Top 100 der Logistik 2012/2013”, Hamburg: DVV Media Group, 2012. Klaus, P., Krieger, W., Krupp, M. [Ed.]: „Gabler Lexikon Logistik – Management logistischer Netzwerke und Flüsse“, Wiesbaden: Gabler, 5th ed., 2012. Kummer, S., Schramm, H., Sudy, I.: „Internationales Transport- und Logistikmanagement“, 2nd ed., Wien: facultas wuv, 2009. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2022

4.14 Outsourcing

Module number:	3130
Module title in German:	Outsourcing
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	7th semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. Hartmut Reinhard
Lecturer:	Prof. Dr. Hartmut Reinhard
Learning outcome:	After actively participating in this module, students will understand all essential elements of an outsourcing process by making fundamental considerations on strategic decisions, the development of a concept, the tender and negotiation, as well as on price calculations and change management, and by expressing an opinion on them. As part of the implementation process, students go through all the essential steps of the outsourcing process with numerous practical references. In particular, they train the planning of change management using the example of a logistics outsourcing project in group work as part of a role play. The goal is to independently determine scope team and timeline for sub-projects and to represent them in the group. Bottlenecks are to be classified and decisions are to be made on how to proceed, so that the students can use their understanding of outsourcing concepts in a targeted manner in their future professional environment and plan outsourcing processes independently, as well as act in project groups.
Module content:	Outsourcing
1st week / 8 semester hours per week	• strategic analysis, potential analysis and decision
2nd week / 8 semester hours per week	• concept and contract design (focal points)
3rd week / 8 semester hours per week	• international tender, negotiation and pricing
4th week / 8 semester hours per week	• internal outsourcing (shared service center)
5th week / 8 semester hours per week	• introduction to the exercise "Project Management for the Implementation of Outsourcing Projects" and start of the elaboration
6th and 7th week / 8 semester hours per week	• development of the procedure for sub-projects by the students and coaching by the professor
8th week / 8 semester hours per week	• presentation and discussion of the solutions by the students
Total	4 weeks of lectures 1 week of introduction to the exercise 2 weeks of work on the exercise case and coaching appointments 1 week of presentation and discussion of the solutions

Teaching and learning methods:	on-site teaching and seminar-based teaching and supervision of the work and coaching by the supervising professor
Assessment method(s):	examination: 75% presentation: 25%
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	135 h
exam preparation:	—
Recommended prerequisites:	—
Mandatory prerequisites:	—
Recommended literature:	Müller-Daupert, B. (Ed.): Logistik-Outsourcing, 2nd ed., Munich, Vogel, 2009. Hollekamp, M.: Strategisches Outsourcing von Geschäftsprozessen, 1st ed., Munich/Mering, Rainer Hamp Verlag, 2005. Pulverich, M./Schietinger, J. (Ed.): Service Levels in der Logistik, 1st ed., Munich, Vogel, 2007. Vater, H. (Ed.) /Reinhard, H. (Ed.): Praxishandbuch Kostensenkungspläne. Umsetzung, Erfolgsfaktoren, Best Practice, 1st ed., Weinheim, Wiley-VCH Verlag, 2012. Further literature recommendations will be communicated during the lectures.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2022

Logistics Management – Information Management

4.15 Methods of Business Process Modeling

Module number:	3220
Module title in German:	Methoden der Geschäftsprozessmodellierung
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	4th semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr.-Ing. Tom Tiltmann
Lecturer:	Prof. Dr.-Ing. Tom Tiltmann, Severin Landwein (associate lecturer)
Learning outcome:	Students can visualize and optimize processes and data in companies or organizations by first modeling given and limited circumstances individually in order to acquire the necessary tools and work steps and by then visualizing the optimization potential in a self-chosen example in order to carry out or accompany change processes on a sound basis.
Module content:	• model formation scheme • process modeling • data modeling
Teaching and learning methods:	on-site teaching, exercises for process and data modeling, individual project
Assessment method(s):	examination The successful participation in the project is a prerequisite for the exam.
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	48 h lecture 32 h exercise 80 h
preparation and follow-up:	80 h
exam preparation:	20 h
Recommended prerequisites:	—
Mandatory prerequisites:	—
Recommended literature:	Schmelzer/Sesselmann: Geschäftsprozessmanagement in der Praxis, 9th ed., 2020. Elmasri, R. A./Navathe, S. B.: Grundlagen von Datenbanksystemen, 2009. Heuer: Datenbanken. Konzepte und Sprachen, mitp-Verlag, 2000. Laudon, K./Laudon, J./Schoder, D.: Wirtschaftsinformatik. Eine Einführung, 2009. Scheer: Wirtschaftsinformatik, Springer, 1997.
Use of the module in other programs:	—
Particularities:	—

Last update:	02/2022

4.16 Logistics IT and ERP Systems

Module number:	3210
Module title in German:	Logistik-IT und ERP-Systeme
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	5th semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. rer. nat. Franz Josef Weiper
Lecturer:	Prof. Dr. rer. nat. Franz Josef Weiper
Learning outcome:	The students can analyze, describe and work out requirements and processes of modern logistics IT systems (warehouse, production, procurement, distribution, transport...) by learning the basic concepts of IT (development, data management, modeling, data exchange, architecture, portals) and logistics IT systems (e.g. ERP, WMS, TMS, SCM), as well as applying selected processes practically (e.g. master data, CRM, order management, procurement, production, warehousing) in order to incorporate and develop new logistics IT processes.
Module content:	• IT basics (development, data management, data exchange, architecture, portals). • IT requirements due to different tasks from different logistics areas (distributed, networked, mobile, transparent, integrated ...) • basics of logistics IT systems (ERP, WMS, TMS, SCM) as well as selected logistics IT processes (such as route planning, optimization problems, key figure systems)
Practical training:	• various tutorials/seminars (e.g. HTML, SQL, BPMN) • practical exercises on modern logistics IT systems (ERP, WMS, TMS, SCM)
Teaching and learning methods:	on-site teaching, practical exercises in the IT laboratory, as well as project work
Assessment method(s):	The module is evaluated based on two partial performances: • documentation of learning progress in the form of a portfolio of exercises (50%) • elaboration and presentation of an application-oriented group project, including questions (50%)
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	32 h lecture 16 h exercise 16 h practical training 64 h
preparation and follow-up:	48 h exercise 48 h project 96 h
exam preparation:	20 h

Recommended prerequisites:	—
Mandatory prerequisites:	—
Recommended literature:	lecture script Abts D./Mülder, W.: Grundkurs Wirtschaftsinformatik. Eine kompakte und praxisorientierte Einführung, 8th ed., Springer Vieweg, 2013. Ten Hompel, M.: IT in der Logistik 2013/2014. Marktübersicht & Funktionsumfang, Fraunhofer Verlag, 2013. Weilkiens, T. and others: Basiswissen Geschäftsprozessmanagement, 2nd ed., dpunkt.verlag, 2015. Hausladen, I.: IT-gestützte Logistik. Systeme - Prozesse - Anwendungen, 2nd ed., Gabler Verlag, 2014. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2022

Logistics Management – Phase-Specific Deepening

4.17 Distribution Logistics

Module number:	3310
Module title in German:	Distributionslogistik
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	3rd semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. rer. pol. Stephan Freichel
Lecturer:	Prof. Dr. rer. pol. Stephan Freichel
Learning outcome:	The students • are able to define common terms of distribution logistics and describe logistics chains by analyzing and comparing them in order to be able to select different characteristics later on when structuring (distribution) logistics systems. • deal with the strategic significance and current trends in distribution logistics by researching current technical literature and specialized media in order to be able to make strategic decisions on the basis of sound information. • are able to systematically integrate distribution logistics into the concepts of marketing and sales by comparing commonalities and conflicting objectives in order to be able to quickly identify the interrelationships and mutual influence possibilities of both corporate functional areas later on. • are able to identify the special features of distribution logistics for manufacturing companies as well as for trading companies and spare parts logistics by analyzing core statements from the technical literature in order to be able to act successfully later on the basis of the knowledge of the usages of the industries. • are able to describe and analyze vertical and horizontal dimensions of distribution channels and networks and apply them to practical examples by comparing essential characteristics and interrelationships in order to investigate and improve distribution structures in practice. • can independently apply the functions of logistics to distribution logistics by preparing and presenting presentations in reverse classrooms in order to transfer specific technical facts of the relevant fields of activity and develop them further through research-based learning. • are able to discuss specific aspects of the organization and management of distribution logistics by analyzing the learned basics in the context of case studies in order to understand and question potential job profiles and to be able to shape them sustainably in the professional environment as a team member and/or as a manager in the company.
Module content:	• terms, development and goals of distribution logistics, • classification of distribution logistics in the supply chain, • importance, trends and strategies of distribution logistics, • special features of international distribution logistics, • classification of distribution logistics into the concepts of marketing and sales,

	• importance of distribution logistics for manufacturing companies and trading firms in B2B and B2C,
	• special features of the distribution of spare parts,
	• analysis and design of distribution channels and networks,
	• functions of distribution logistics,
	  • order processing and supply chain event management,
	  • inventory management and category management,
	  • distribution centers and logistics properties,
	  • packaging design,
	  • shipping, transport management and international container traffic,
	  • logistics service providers and parcel services in distribution logistics,
	• organization and management of distribution logistics.

Teaching and learning methods:	Exercise: Case studies on, among other things, the use of technology in distribution logistics, distribution logistics in B2C and B2B trade, industry-related distribution logistics (pharmaceuticals, new vehicles, consumer goods), implications of Industry 4.0/digital networking, air freight and world trade. on-site teaching, reverse classroom lectures, seminar-based teaching in the form of case study presentations by students, and if applicable guest lectures/excursions.
Assessment method(s):	Final examination with (partly handwritten) portfolio (pass/fail) and written exam. Participation in the exam only with presentation of the portfolio (submission on the exam date). Passing the written exam requires a passed portfolio. The exam results in the grade (100%). Details and procedure will be announced in the first lecture.
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	32 h lecture 32 h exercise 64 h
preparation and follow-up:	76 h
exam preparation:	40 h
Recommended prerequisites:	Fundamentals of Logistics
Recommended literature:	Pfohl, H.-Chr. 2018. Logistiksysteme. Betriebswirtschaftliche Grundlagen. 9th ed., Springer, Berlin 2018. Helmold, M. (2010): Distributionslogistik. Kundenzufriedenheit und Ausschöpfung von Wettbewerbsvorteilen durch die stetige und nachhaltige Optimierung der Distributionslogistik. Shaker, Düren 2010. Tripp, Chr. 2019. Distributions- und Handelslogistik. Netzwerke und Strategien der Omnichannel-Distribution im Handel. Gabler, Wiesbaden 2019. Koether, R. (2018): Distributionslogistik. Effiziente Absicherung der Lieferfähigkeit. 3rd ed., Gabler, Wiesbaden 2018. Selzer, G. (2010): Distributionslogistik. Die Steuerung von weltweit vernetzten Warenströmen. Shaker, Düren 2010. Pfohl, H.-Chr. 2021. Logistikmanagement. Konzeption und Funktionen. 4th ed., Springer, Berlin 2021. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—

Particularities:	—
Last update:	02/2023

4.18 Production Logistics

Module number:	3320
Module title in German:	Produktionslogistik
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	4th semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr.-Ing. Christoph S. Zoller
Lecturer:	Prof. Dr.-Ing. Christoph S. Zoller
Learning outcome:	At the end of the semester students are able to analyze, lay out and optimize technical information and material flow systems in the production by applying selected methods from lean production and current IT-supported material flow simulation in order to successfully initiate or accompany optimization measures of storage, transport and handling processes within production logistics later on in professional life.
Module content:	• basic elements of information and material flow systems • technical material flow models • lean management methods within production logistics • procedures for planning, management and control of internal transport, handling and storage processes • development, evaluation and optimization of simulation models for the illustration of logistic processes within production, using event-oriented standard simulation software.
Teaching and learning methods:	lectures, planning games, working in groups, student presentations
Assessment method(s):	The grade for the module is based on 5 equally weighted tests with, among others, multiple choice questions.
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	32 h lecture 32 h practical training 64 h
preparation and follow-up:	36 h lecture 40 h practical training 76 h
exam preparation:	40 h
Recommended prerequisites:	—
Mandatory prerequisites:	—
Recommended literature:	Slide script is handed out during the lecture.

	Günthner, W.A./Boppert, J: Lean Logistics, Berlin/Heidelberg, Springer-Verlag, 2013. Eley, M.: Simulation in der Logistik, Berlin/Heidelberg, Springer-Verlag, 2012. Günthner, W. A./et.al.: Schlanke Logistikprozesse, Berlin/Heidelberg, Springer-Verlag, 2013. Erlach, K.: Wertstromdesign. Der Weg zur schlanken Fabrik, Berlin/Heidelberg, Springer-Verlag, 2010. Arnold, D./Furmans K.: Materialfluss in Logistiksystemen, 6th ed., Berlin/Heidelberg, Springer-Verlag, 2009. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2022

4.19 Procurement Logistics

Module number:	3330
Module title in German:	Beschaffungslogistik
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	5th semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. rer. pol. Helmut Schulte Herbrüggen
Lecturer:	Prof. Dr. rer. pol. Helmut Schulte Herbrüggen
Learning outcome:	After the successful completion of the module “Procurement Logistics” students are able to use just-in-time and just-in-sequence procurement logistics concepts and concepts such as Vendor Managed Inventory (VMI) and Collaborative Planning Forecasting and Replenishment (CPFR) for national and international production and trading companies by carrying out relevant analytical procedures such as information and material flow analyses as well as ABC and XYZ analyses in order to ensure on the basis of these analyses the delivery concepts of parts or articles that are adequate, as well as stocking concepts even in complex production and trading companies and to introduce and develop them further, considering ethical, social and ecological aspects.
Module content:	• make or buy decisions (in-house production or external procurement including cooperation option) • strategic and operational procurement (including purchasing to ensure the legal availability of goods) • supply early warning systems • sourcing concepts (in- and outsourcing, local and global sourcing, brine, single, dual and multiple sourcing, parts and modular sourcing as well as other sourcing concepts such as eSourcing, cooperative sourcing, parallel sourcing etc.) • international procurement market analysis • procurement policies and instruments, including social, intercultural and ethical aspects • organizational processes in procurement and purchasing, in particular information and material flows between suppliers and customers up to the provision of goods for production: from the national and international search for suppliers, through supplier selection, negotiation and conclusion of contracts, to supplier assessment, controlling and auditing • aspects of social responsibility
Teaching and learning methods:	interactive lectures: exercises in which students work individually or in groups on procurement logistics issues, answer questions and present practical examples.
Assessment method(s):	examination The use of a non-programmable calculator is allowed during the exam.

Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	32 h lecture 32 h exercise 64 h
preparation and follow-up:	76 h
exam preparation:	40 h
Recommended prerequisites:	Fundamentals of Logistics
Recommended literature:	script of slides, exercises. Appelfeller, W./Buchholz, W: Supplier Relationship Management. Strategie, Organisation und IT des modernen Beschaffungsmanagements, latest ed., Wiesbaden. Heß, G.: Supply-Strategien in Einkauf Beschaffung. Systematischer Ansatz und Praxisfälle, latest ed., Wiesbaden; 1st ed. from 2008 available as e-Book. Large, R.: Strategisches Beschaffungsmanagement. Eine praxisorientierte Einführung. Mit Fallstudien, latest ed., Wiesbaden. Meierbeck, R.: Strategisches Risikomanagement der Beschaffung. Entwicklung eines ganzheitlichen Modells am Beispiel der Automobilindustrie, latest ed., Cologne. Schuh, G. and others: Beschaffungslogistik im Maschinen- und Anlagenbau, latest ed., Aachen. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	09/2022

Logistics Management (optional modules) – in the 4th semester

4.20 Services Marketing and Management

Module number:	4130
Module title:	Services Marketing and Management
Module type:	required elective
ECTS credits:	6
Language:	English
Duration:	one semester
Recommended for semester:	4th semester
Frequency:	only in the summer semester
Responsible person for the module:	Prof. Dr. Zelal Ates
Lecturers:	Prof. Dr. Zelal Ates
Learning outcome:	Upon completion of this course, students should be able to analyze the characteristics of consumer and business service industries and to develop the consequences of the nature of services for the services marketing mix and for service quality and satisfaction by applying the tools, methods and concepts specific to this field (e.g. 7 P's, service blueprinting, gap analysis, servqual) to real cases and collaborative learning in groups in order to develop profitable customer relationships in service businesses.

Module content:	• Introduction to services marketing: trends, opportunities, and characteristics of services
	• consumer behavior in a services context
	• profitable service strategies
	  ○ improving service quality
	  ○ designing effective customer feedback systems
	• marketing-mix for services
	  ○ developing service concepts
	  ○ pricing of services
	  ○ designing and managing service processes
	  ○ balancing demand and productive capacity
	  ○ distributing services
	  ○ communicating services
	  ○ crafting the service environment
	  ○ managing people for service advantage
	  • customer as a co-producer
	  • service employees

Teaching and learning methods:	This course will employ a seminar format with students expected to take a very active role in their learning: "Essential of Services Marketing and Management" relies on interactive lessons, aiming both on the development of intellectual understanding and on the development of communication skills. The course includes transmitting problem-centred information, collaborative learning in groups and case studies. The assignments involve practical application of theoretical knowledge students are gaining in this course, and also provide them with opportunities to test the new skills they are developing. Participants are strongly invited to present their own examples or experiences to enrich discussion.
Assessment method(s):	Written exam (80%) and group project (20%) which have both to be passed separately.
Workload	180 h

(25- 30 h ≙ 1 ECTS credit):	
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	—
Recommended reading:	Lovelock, C. and Wirtz, J. (2016): Services Marketing: people, technology, strategy, 8th ed., World Scientific Publishing 2016. Grönroos, C. (2007): Service Management and Marketing: customer management in service competition, 3rd ed., Wiley. Zeithaml, V. A. /Bitner, M. J. /Gremler, D. (2012): Services Marketing, 2nd ed., Mc Graw Hill. Further literature recommendations will be communicated during the lecture.
Use of the module in other degree programs:	—
Particularities:	—
Last update:	02/2022

4.21 Introduction to International Logistics

Module number:	4050
Module title:	Introduction to International Logistics
Module type:	required elective
ECTS credits:	6
Language:	English
Duration:	one semester
Recommended for:	4th semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr. Hartmut Reinhard
Lecturer:	TBD
Learning outcome:	After active participation in this module/seminar, the students are able to • compare the most important concepts and methods of international logistics management, • recognize and classify international correlations, • operate in different legal areas and • consider social, intercultural and ethical aspects in your decisions by • classifying the respective tasks in their frame of reference and action according to the situation or occasion, • analyzing or defining the specific requirements and objectives in a social, intercultural and ethical context and • developing action strategies aligned to this in order to act appropriately in the personal and professional international and intercultural environment according to the situation and target group.
Module content:	• fundamentals, meaning and goals of logistics • international procurement logistics • instruments of materials management • international information logistics • international logistics strategies • international distribution logistics • aspects of social responsibility (see section “Learning outcome”)
Teaching and learning methods:	lecture
Assessment method(s):	examination (100%)
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	76 h
exam preparation:	40 h
Recommended prerequisites:	—

Mandatory prerequisites:	—
Recommended literature:	Huber, A.: Internationales Management. Jahrmann, F.-U.: Außenhandel. Kutschker, M./Schmid, St.: Internationales Management. Meffert, H./Burmann, C.: Internationales Marketing. Zentes, J., u. a.: Fallstudien zum Internationalen Management. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2022

4.22 Logistics Consulting

Module number:	4010
Module title in German:	Logistik-Consulting
Module type:	required elective
ECTS credits:	6
Language:	German
Duration:	16 weeks (per semester)
Recommended for:	4th semester
Frequency:	once per academic year in the summer semester (alternatively, every semester in the degree program B. Sc. In Business Administration of the Faculty 04)
Responsible:	Prof. Dr. Michael Lorth
Lecturer:	Prof. Dr. Michael Lorth
Learning outcome:	After active participation in this module/seminar, students are able to solve a given problem - primarily in the field of logistics and/or supply chain management - in a goal-oriented and systematic manner within the framework of a clearly structured consulting project by using suitable instruments (target-resource-constructs), • to understand the problem as a whole and define it precisely, • to analyze and assess the problem comprehensively regarding possible symptoms, causes, effects, interdependencies, possibilities of influence, etc., • to develop suitable alternatives for solving the problem and evaluate it in a criteria-oriented manner together with the client, • to implement the optimal solution together with the client and • to finish the consultation project after successful project completion, in order to be able to independently carry out or manage consulting projects together as a member of a physical-analog on-site and/or virtual-digital team of consultants or – based on the relevant experience gained – as responsible project manager. [Taxonomy levels (K1) to (K6)].
Module content:	• The term and the product of (logistics) consulting • The market of (logistics) consultations • (Current) trends and challenges as drivers of the need for consulting on logistical issues: Digitization, Internet of Things (IoT), complexity, flexibility, agility, sustainability • Specific requirements for logistics consulting • (Logistics) consulting from the client's point of view • The methodological and conceptual framework of analog/digital project management and (logistics) consulting • The individual phases of the (logistics) consulting process • Practical application (research-based learning project): Realization of a (fictitious) consulting project with a current problem Note: The module content can be partially or fully integrated into projects.
Teaching and learning methods:	A combination of seminar-based, analog and digital teaching/learning content, analog and/or virtual-digital collaboration in teams, and project-based teaching with workshop elements and consistent application of the principle of research-based learning and the problem-oriented approach (problem-solving cycle) according to the specifications of complex, realistic and only slightly pre-structured problems
Assessment method(s):	Performance assessment according to § 22 para. 5 PO degree program Logistics B. Sc.

	In this module, the performance assessment does not only include the development and implementation of a systematic and problem-oriented approach (problem-solving cycle) and a clearly structured analog and digital project and team management, but also • oral examination elements (active analog and digital communication, coordinaton and collaboration in the project team, ad-hoc presentation of (group) work results, submission of status reports, where applicable also in digital/multimedia format) and • written examination elements (analyses, research, concepts, plans, visualizations, work and project documentation, records, portfolio, submission in digital format).
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h (working on a project in during/in addition to the lecture)
exam preparation:	—
Recommended prerequisites:	Project Management, Fundamentals of Logistics, Business Administration, Transport Logistics
Mandatory prerequisites:	—
Recommended literature:	Fundamental literature: Bamberger, I.; Wrona, T. (2012): Strategische Unternehmensberatung: Konzeptionen, Prozesse, Methoden, 6th ed., Wiesbaden. Chereau, P.; Meschi, P.-C. (2018): Strategic Consulting: Tools and methods for successful strategy missions, Cham. Curuksu, J. D. (2018): Data Driven: An Introduction to Management Consulting in the 21st Century, Cham. Doppler, K.; Lauterburg, C. (2019): Change Management: Den Unternehmenswandel gestalten, 14th ed., Frankfurt. Fink, D. (2009): Strategische Unternehmensberatung, Munich. Kotter, J.P.; Cohen, D.S. (2005): The Heart of Change Field Guide: Tools and Tactics for Leading Change in Your Organization, Boston 2005. Lippitt, G.; Lippitt, R. (2015): Beratung als Prozess: Was Berater und ihre Kunden wissen sollten (Ed. Rosenberger), 4th ed., Wiesbaden. Lippold, D. (2018): Die Unternehmensberatung: Von der strategischen Konzeption zur praktischen Umsetzung, 3rd ed., Wiesbaden. Wegmann, C.; Winklbauer, H. (2006): Projektmanagement für Unternehmensberatungen: Mit Beispielen aus dem Inhouse Consulting von Deutsche Post World Net, Wiesbaden. Wickham, P; Wilcock, J. (2012): Management Consulting: Delivering an Effective Project, 4th ed., Harlow. Depending on the thematic focus of the consulting (exercise) project further source references will be communicated.
Use of the module in other programs:	in the Logistics courses in the degree program B. Sc. Business Administration
Particularities:	The teaching and learning in this module are characterized by • the provision of one or more practice-oriented problem definitions with high complexity, current relevance and little pre-structuring,

- practicing and following the problem-solving cycle systematically,
- working together independently in physical-analog on-site or virtual-digital teams,
- presence, responsiveness and participation of the lecturer during the entire analog and digital attendance period (lecture period),
- self-management and analog/digital project management of the affairs and responsibilities of the group,
- analog and/or digital workshop talks with interim presentation of the current state of work and discussion of the procedure and the work results achieved so far involving all groups,
- formulation/submission of oral status (interim) reports for internal and/or external addressees at the beginning of the courses,
- analog and/or digital interim presentations after reaching certain milestones as well as
- analog and/or digital final presentations (starting question, selected procedure, achieved results) at the end of the semester, etc.

In addition, the learning and work processes and their results are to be adequately documented by the students during the semester by means of recordings of any kind and form, (photo-) protocols and presentation of results. Furthermore, research results and other materials must be prepared in a suitable manner and collected with the documentation on digital portfolios (folders with documents) and submitted on specific dates.
The function and effect of the teaching and learning concept and the learning progress perceived by the students are also examined by evaluating the self-reflections to be written by each student in the middle and at the end of the semester.

The assessment of the examination performance depends on the extent to which specific competence-oriented performance standards (requirements) are met, which are determined based on the level and process stage matrix according to Anderson/ Krathwohl (2001).

Please note:
Both the project-based teaching concept and the fully extended form of examination (performance test) require continuous attendance and active participation in the courses as well as in the project team meetings and appointments (on site or digitally).

Last update:	03/2023

4.23 Planning of Logistics Centers

Module number:	4030
Module title in German:	Planung von Logistikzentren
Module type:	required elective
ECTS credits:	6
Language:	German
Duration:	16 weeks (per semester)
Recommended for:	4th semester
Frequency:	once per academic year in the summer semester (alternatively, every semester in the degree program B. Sc. in Business Administration at the Faculty 04)
Responsible:	Prof. Dr. Michael Lorth
Lecturer:	Prof. Dr. Michael Lorth
Learning outcome:	After active participation in this module/seminar, students can develop an integrated project plan for the complex task(s) of planning, building and commissioning a (closed) logistics center by • recording and structuring the aspects or tasks associated with the planning, construction and commissioning of logistics centers across all disciplines and planning areas involved, thus breaking down the overall project task into subprojects and subtasks, • recording and analyzing the respective content-related, time-logical and resource-related relationships between the individual project tasks, • bringing the subprojects and tasks into a chronological and logical sequence and assigning them to the respective project phases and, • combining the individual project components (subprojects, project phases) into an integrated (standard) overall project plan, in order to be able to take over essential tasks of an integrated physical-analog on site and/or virtual-digital collaborating project management or even the project management for the planning, construction and commissioning of a logistics center (or comparable complex project tasks) in the later professional field of logistics as a member of a project management team or - after the appropriate development of experience - as a responsible project manager. [Taxonomy levels (K1) to (K6)].
Module content:	• logistics centers as elements of comprehensive logistics systems or value networks • planning, construction and commissioning of logistics centers as a complex (economic/legal/technical) project • methodological fundamentals of the analog and digital management of complex projects • strategic planning of logistics centers (among others, locations, capacities, flexibility, operating strategy, operator and usage concept, investment planning, etc.) • Preliminary planning of the technical infrastructure of logistics centers: structural planning (including process model development, service area planning, dimensioning, intralogistics preliminary planning), planning of the building structure, layout planning, IT infrastructure preliminary planning, TGA preliminary planning. • Detailed planning of the technical infrastructure of logistics centers: system planning (including detailed planning of (intra-)logistics systems, in particular warehouse, conveyor, picking, distribution and identification systems, TGA detailed planning, IT detailed planning), • planning of the construction of logistics centers (execution planning and execution in the planning areas logistics, buildings and IT), • planning of the commissioning of logistics centers,

	• current development trends in the planning of logistics centers (digitization, Internet of Things (IoT), industry 4.0, sustainability). Note: The module content can be partially or fully integrated into projects.
Teaching and learning methods:	A combination of seminar-based and seminar-based teaching, analog and digital teaching and learning content, analog and/or virtual digital collaboration in teams as well as workshop elements and consistent application of the principle of research-based learning and the problem-oriented approach (problem-solving cycle) according to the specifications of complex, realistic and only slightly pre-structured problems.
Assessment method(s):	Performance test according to § 22 para. 5 PO degree program Logistics B. Sc. In this module, the performance assessment does not only include the development and implementation of a systematic and problem-oriented approach (problem-solving cycle) and a clearly structured project and analog and/or digital team management, but also • oral examination elements (active analog and digital communication, coordination and collaboration in the project team, ad-hoc presentation of (group) work results, submission of status reports, if applicable in digital/multimedia format) and • written examination elements (analyses, research, concepts, plans, visualizations, work and project documentation, portfolio, protocols, submission in a digital format).
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h (working on a project in during/in addition to the lecture)
exam preparation:	—
Recommended prerequisites:	Project Management, Fundamentals of Logistics, Business Administration, Transport Logistics
Mandatory prerequisites:	—
Recommended literature:	Fundamental literature: Alda, W.; Hirschner, J. (2016): Projektentwicklung in der Immobilienwirtschaft: Grundlagen für die Praxis, 6th ed, Wiesbaden. Felkai, R.; Beiderwieden, A. (2015): Projektmanagement für technische Projekte: Ein prozessorientierter Leitfaden für die Praxis, 3rd ed., Wiesbaden. Grundig, C.-G. (2018): Fabrikplanung: Planungssystematik, Methoden, Anwendungen, 6th ed., Munich. Jakoby, W. (2019): Projektmanagement für Ingenieure: Ein praxisnahes Lehrbuch für den systematischen Projekterfolg, 4th ed., Wiesbaden. Langhagen-Rohrbach, C. (2012): Moderne Logistik: Anforderungen an Standorte und Raumentwicklung, in: Raumforschung und Raumordnung, 70 Jg. (2012), p. 217–227. Martin, H. (2012): Praxiswissen Intralogistikplanung: Reale Projekte mit Ist-Situation, Zielsetzung, Planungen und Wirtschaftlichkeitsbetrachtungen, Wiesbaden. Martin, H. (2016): Transport- und Lagerlogistik: Planung, Struktur, Steuerung und Kosten von Systemen der Intralogistik, 10th ed., Wiesbaden. Münchow, M.-M. (2016): Kompendium der Logistikimmobilie: Entwicklung, Nutzung und Investment, 2th ed., Wiesbaden. Nehm, A.; Schryver, C. (2007): Alternativen der Logistikimmobilien-Bereitstellung, in Bohlmann, B.; Krupp, T. (Eds.): Strategisches Management für Logistikdienstleister: Grundlagen und Praxisberichte, Hamburg.

	Pawellek, G. (2014): Ganzheitliche Fabrikplanung: Grundlagen, Vorgehensweise, EDV-Unterstützung, 2th ed., Berlin/Heidelberg. Schuchmann, C. (2018): Inbetriebnahme von Logistikzentren: Praxiserprobte Methoden, Hilfsmittel und Checklisten, Wiesbaden. ten Hompel, M.; Schmidt, T.; Dregger, J. (2018): Materialflusssysteme: Förder- und Lagertechnik, 4th ed., Berlin/Heidelberg. Additional references to further, supplementary and in-depth sources will be communicated at the beginning of the lecture.
Use of the module in other programs:	in the Logistics courses in the degree program B. Sc. Business Administration
Particularities:	The teaching and learning in this module are characterized by • the provision of one or more practice-oriented problem definitions with high complexity, current relevance and little pre-structuring, • practicing and following the problem-solving cycle systematically, • working together independently in physical-analog on-site or virtual-digital teams, • presence, responsiveness and participation of the lecturer during the entire analog and digital attendance period (lecture period), • self-management and analog/digital project management of the affairs and responsibilities of the group, • analog and/or digital workshop talks with interim presentation of the current state of work and discussion of the procedure and the work results achieved so far involving all groups, • formulation/submission of oral status (interim) reports for internal and/or external addressees at the beginning of the courses, • analog and/or digital interim presentations after reaching certain milestones as well as • analog and/or digital final presentations (starting question, selected procedure, achieved results) at the end of the semester, etc. In addition, the learning and work processes and their results are to be adequately documented by the students during the semester by means of recordings of any kind and form, (photo-) protocols and presentation of results. Furthermore, research results and other materials must be prepared in a suitable manner and collected with the documentation on digital portfolios (folders with documents) and submitted on specific dates. The function and effect of the teaching and learning concept and the learning progress perceived by the students are also examined by evaluating the self-reflections to be written by each student in the middle and at the end of the semester. The assessment of the examination performance depends on the extent to which specific competence-oriented performance standards (requirements) are met, which are determined based on the level and process stage matrix according to Anderson/ Krathwohl (2001). **Please note**: Both the project-based teaching concept and the fully extended form of examination (performance test) require continuous attendance and active participation in the courses as well as in the project team meetings and appointments (on site or digitally).
Last update:	03/2023

4.24 Traffic Logistics

Module number:	4020
Module title in German:	Verkehrslogistik
Module type:	required elective
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	4th semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr. Thomas Krupp
Lecturer:	TBD
Learning outcome:	At the end of the semester students should be able to analyze the macroeconomic aspects of regional, national and international passenger and freight transport logistics and determine and evaluate the national and international markets and providers of transport and transport logistics services by applying the tools of business logistics and business administration to the challenges of transport logistics in order to evaluate and structure the overall and individual economic and social significance, framework conditions and effects of transport logistics.
Module content:	**Introduction** • conceptual fundamentals, goals and tasks of national and international transport and transport logistics **Master plan for freight transport and logistics** • Optimal use of traffic routes - efficient traffic design • Avoid traffic – ensure mobility • More traffic on rail and inland waterways • Increased expansion of transport axes and nodes • Environmentally and climate friendly, quiet and safe traffic • Good jobs and good education in the transport industry • Further measures to strengthen the logistics location of Germany
Teaching and learning methods:	presentation by the lecturer, dialog with the students, guest lecturers.
Assessment method(s):	examination (100%)
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	76 h
exam preparation:	40 h
Recommended prerequisites:	Fundamentals of Logistics
Mandatory prerequisites:	—

Recommended literature:	Obligatory: PowerPoint presentation (script) of the lecturer with tasks and case studies. Recommended: Aberle, G.: Transportwirtschaft. Einzelwirtschaftliche und gesamtwirtschaftliche Grundlagen, 4th revised and extended ed., Munich/Wien 2006. Buchholz, J./Clausen, U./Vastag, A. (Ed.): Handbuch der Verkehrslogistik, Heidelberg 1998. Corsten, H.: Dienstleistungsmanagement, 3rd ed., Munich 1997. Gimmler, K.-H.: Transport- und Logistikvertragsrecht, 2009. Ihde, G. B.: Transport, Verkehr, Logistik. Gesamtwirtschaftliche Aspekte und einzelwirtschaftliche Handhabung, 3rd compl. rev. und ext. ed., Munich 2001. Institut für Mobilitätsforschung (Ed.): Zukunft der Mobilität. Szenarien für das Jahr 2025. Erste Fortschreibung, BMW Group, Munich 2005. Kummer, S./Riebesmeier, B./Gürtlich, G.: Gesamtverkehrsplanung und Verkehrsinfrastrukturplanung, Vienna 2007. Schubert, W. (Ed.): Verkehrslogistik. Technik und Wirtschaft, Munich 2000. van Suntum, U.: Verkehrspolitik, Munich 1986. Vahrenkamp, R.: Logistik. Management und Strategien. 6th ed., Oldenbourg. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	03/2022

4.25 Customs and International Trade Law

Module number:	4040
Module title in German:	Zoll- und Außenhandelsrecht
Module type:	required elective
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	4th semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr. Hartmut Reinhard
Lecturer:	Reinhard Fischer (associate lecturer)
Learning outcome:	At the end of the semester students are able to • apply the customs and foreign trade regulations to import and export processes in companies and logistics service providers, • select the best customs procedure for the respective business transaction, • conduct the associated customs process in a legally secure manner, • classify the goods concerned in the World Customs Organization's harmonized system, • calculate the correct import duties, • understand the requirements of the Secure Supply Chain, • evaluate customs and non-tariff trade barriers and • assess sanctions and embargoes by • applying the legal system of customs and foreign trade law, • applying the regulations of customs and foreign trade law with international law, EU and national law and • developing the principles of cross-border trade in goods through case studies and examples in order to • be able to carry out customs and foreign trade clearance in conformity with the law in business practice, • release savings potentials by using simplifications in customs and foreign trade law and • avoid compliance risks in customs and foreign trade law.
Module content:	In addition to the fundamentals of scientific work, the course content conveys aspects for social commitment and includes the following topics: • introduction to customs and foreign trade law • legislation/principles • customs processes in goods traffic • customs and non-tariff barriers • customs simplifications • customs and security/risk avoidance in customs/Secure Supply Chain
Teaching and learning methods:	seminar-based teaching
Assessment method(s):	examination
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses	64 h lecture

(4 semester hours per week)	
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	Private Law
Mandatory prerequisites:	—
Recommended literature:	Fischer, R./Reinhard, H.: Ein Ziel – Zwei Wege? Der Vergleich zwischen Authorized Economic Operator und Customs-Trade Partnership Against Terrorism. In: AW-Prax, 16. vol., 4/ 2010, p. 119-156. Drees, F. J. et. al.: Zoll & Export 2011: Alles, was Sie jetzt wissen müssen! Bundesanzeiger, 2011. Witte, P./Wolffgang, H.-M.: Lehrbuch des Europäischen Zollrechts, 6th ed., nwb Verlag, 2009. Witte, P./Henke, R.: Fallstudien Europäisches Zollrechts, 3rd ed., nwb Verlag, 2010. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	03/2022

4.26 Environmental Management / Green Logistics

Module number:	4060
Module title in German:	Umweltmanagement / Green Logistics
Module type:	required elective
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	4th semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr. rer. nat. Kathrin Hesse
Lecturer:	Prof. Dr. rer. nat. Kathrin Hesse
Learning outcome:	The students can plan, calculate and classify environmentally friendly logistics processes in companies and company networks as well as supply chains by • identifying the main stakeholders and influencing variables (including resources), • verifying the environmental relevance of logistics (environmental protection in logistics), • deriving sustainable measures to protect the environment and resources in order to • show the effects of logistics on the environment as CO2 emissions and • present proposals for avoidance, reduction and compensation.
Module content:	In addition to the fundamentals of scientific work, the course content conveys aspects for social commitment and includes the following topics: • environmental policy (including sustainability) • environmental procurement, production, transport, storage and disposal • environmental indicators • operational environmental management systems according to EMAS and ISO 14000 ff • instruments for ecological assessment (e.g. eco-balance, carbon footprint analyses) • Green Logistics • calculation of case studies based on practical experience
Teaching and learning methods:	lectures, exercises, presentations
Assessment method(s):	term paper
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	80 h project
exam preparation:	36 h

Recommended prerequisites:	—
Mandatory prerequisites:	—
Recommended literature:	script and the bibliography it contains
Use of the module in other programs:	—
Particularities:	—
Last update:	03/2022

4.27 Mobility Module

Module number:	4150
Module title in German:	Mobilitätsmodul
Module type:	required elective
ECTS credits:	6
Language:	—
Duration:	one semester
Recommended for:	4th **or** 7th semester – attention: can only be selected once!
Frequency:	twice per academic year in the summer and winter semester
Responsible:	Prof. Dr. Zelal Ates
Lecturer:	—
Learning outcome:	—
Module content:	Within the scope of a "Mobility Module", there is a one-time opportunity to have modules that were successfully completed during a voluntary semester abroad recognized upon application in compensation for an elective module of the fourth or seventh semester. The key criterion is that it is a pure teaching module, which comprises a minimum of 6 ECTS and has been completed in a business administration, engineering or humanities program, or a program in logistics, supply chain management or operations management, and has no counterpart in terms of content in the program. (See §24 BPO Logistics 2020)
Teaching and learning methods:	—
Assessment method(s):	—
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses	—
preparation and follow-up:	—
exam preparation:	—
Recommended prerequisites:	See the examination regulations of the program.
Mandatory prerequisites:	See the examination regulations of the program.
Recommended literature:	—
Use of the module in other programs:	—
Particularities:	—
Latest update:	03/2022

Logistics Management (optional modules) – in the 7th semester

4.28 Waste Management Logistics

Module number:	4090
Module title in German:	Entsorgungslogistik
Module type:	required elective
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	7th semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. rer. nat. Kathrin Hesse
Lecturer:	Prof. Dr. rer. nat. Kathrin Hesse
Learning outcome:	The students can assign criteria-based (waste law, costs, hazard potential) different disposal logistics processes to the treatment processes or facilities depending on the different types of waste by • establishing the legal basis for waste management at the different levels (EU and national) in the context of waste management, • differentiating the specifics of the types of waste, • calculating the efficiency and costs of selected processes in order to make and distinguish an optimal choice for the treatment of future waste materials in terms of recycling and resource efficiency.
Module content:	In addition to the basics of scientific work and presentations, the course contents convey aspects for social commitment and include the following topics: • introduction to the disposal logistics processes, • fundamentals of waste legislation of the EU and Germany down to the individual municipalities, including waste prevention strategies, • waste types and volumes, • disposal logistics processes (collection, transport, handling, treatment), • recycling process of selected valuable materials, • waste management and climate change
Teaching and learning methods:	lectures, exercises, presentations, excursions.
Assessment method(s):	digital examination (70%) and presentation (30%)
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	32 h lecture 32 h exercise 64 h
preparation and follow-up:	76 h project
exam preparation:	40 h
Recommended prerequisites:	—

Mandatory prerequisites:	—
Recommended literature:	script and the bibliography it contains. Bilitewski, B./Härdtle, G: Abfallwirtschaft. Handbuch für Praxis und Lehre, 4th ed., Wiesbaden, Springer Vieweg Verlag, 2013. Kranert, Martin (Ed.): Einführung in die Kreislaufwirtschaft, Planung -- Recht – Verfahren. Fachbuch für Lehre und Praxis, 5th ed., Wiesbaden, Springer Fachmedien Wiesbaden GmbH, 2017. Martens, H./Goldmann, D.: Recyclingtechnik. Fachbuch für Lehre und Praxis, 2nd ed., Wiesbaden, Springer Fachmedien Wiesbaden GmbH, 2016. Piehl, T./Süselbeck, G.: Abfall-Entsorgungs-Trainer. Grundlagen für die Schulung, 10th ed., Hamburg, Storck Verlag, 2013. Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	degree program Production and Logistics (F08)
Particularities:	—
Last update:	03/2022

4.29 Fundamentals of Production Planning and Controlling

Module number:	4080
Module title in German:	Grundlagen Produktionsplanung und -steuerung
Module type:	required elective
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	7th semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. rer. nat. Franz Josef Weiper
Lecturer:	Prof. Dr. rer. nat. Franz Josef Weiper
Learning outcome:	Students learn the fundamental goals and processes of production planning and control (PPC), by recognizing and applying all important key tasks and calculation strategies, as well as gaining initial experience in dealing with the basic functions of a PPS IT system in order to understand and implement the basic approach to order processing in production companies.
Module content:	Content: • challenges and goals of the PPC • key tasks of PPC at a glance • individual tasks of data management in the PPC • individual tasks of production program planning, • production requirements planning and in-house production planning and control • procurement quantity determination • procurement initiation
Practical training:	• introduction to the navigation of a PPC system • management of the material master and the parts list • Management of the work plan • planning of production and procurement quantities • processing a sales order • processing a production order
Teaching and learning methods:	on-site teaching (lecture), learning in small groups (exercises), independent practical work in small groups with preparation of an examination report, technical discussion (individual), blended learning.
Assessment method(s):	examination Successful participation in the practical training is a prerequisite for the examination.
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	32 h lecture 16 h exercise 16 h practical training 64 h
preparation and follow-up:	80 h

exam preparation:	36 h
Recommended prerequisites:	Quantitative Methods I and II and Business Administration
Mandatory prerequisites:	—
Recommended literature:	Wiendahl: Betriebsorganisation für Ingenieure, 2009. Schuh, G./Stich, V.: Produktionsplanung und -steuerung, Grundlagen der PPS, 4th ed., 2012. REFA (Ed.): Methodenlehre der Betriebsorganisation. Planung und Steuerung Teil 1-3. Günther/Tempelmeier: Produktion und Logistik, 2009. Further literature will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	03/2022

4.30 Quality Management

Module code:	4070
Module title in German:	Qualitätsmanagement
Module type:	required elective
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for semester:	7th semester
Frequency:	once a year in the winter semester
Responsible person for the module:	Prof. Dr. Kathrin Hesse
Lecturers:	TBD
Learning outcome:	Students are able to implement standard requirements for a quality management system in a familiar field of work, in which they determine the requirements based on defined terms and principles of quality management, form goals and describe processes, to later be able to contribute to the development of quality management systems. Students can systematically identify, eliminate and avoid cases of errors, where they can select and apply the appropriate methods for the intended use for data collection, data analysis and cause investigation to later solve quality problems reactively and preventively.

Module content:	• definitions and basic concepts of quality management
	• requirements of the quality management standards
	• application of the so-called PDCA (Plan-do-Check-Act) cycle on the levels
	  • organization
	  • business processes (e.g., product development, procurement)
	  • products
	• methods to support the PDCA cycle (e.g. Pareto, Failure Mode and Effect Analysis (FMEA))

Teaching and learning methods:	on-site teaching (lectures, exercises, seminar with students' presentations), learning in small groups, excursions, guest lectures)
Assessment method(s):	written exam, with contribution of extra points from group exercise
Workload (25- 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	32 h lecture 32 h exercise 64 h
preparation and follow-up	76 h group project
exam preparation:	40 h
Recommended prerequisites:	Quantitative Methods I and II
Required prerequisites:	—
Recommended reading:	Linß: Qualitätsmanagement für Ingenieure, Carl Hanser Verlag, 2011 DIN Taschenbuch 226: Qualitätsmanagement – QM-Systeme und –Verfahren, Beuth Verlag, 10th ed., 2019

	Kamiske/Brauer: Qualitätsmanagement von A – Z, Carl Hanser Verlag, 2011. Pfeifer: Qualitätsmanagement - Strategien, Methoden, Techniken, 3rd ed., Hanser Verlag, Ausgabe 2001. Theden/Colsman; Qualitätstechniken – Werkzeuge zur Problemlösung und ständigen Verbesserung, 5th ed., Carl Hanser Verlag, 2013 Werdich: FMEA - Einführung und Moderation: Durch systematische Entwicklung zur übersichtlichen Risikominimierung, Springer Verlag, 2012 More to be communicated during the lecture.
Use of the module in other degree programs:	combined lecture for B. Sc. Logistics and B. Eng. Automotive Engineering
Particularities:	
Last update:	02/2022

4.31 Investment Appraisal

Module number:	4110
Module title in German:	Investitionsrechnung
Module type:	required elective
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	7th semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. Marc Kastner
Lecturer:	Prof. Dr. Marc Kastner
Learning outcome:	The students are able to select procedures and models of investment appraisal according to the situation and to assess their advantageousness for problem solving. They analyze and model general and business problems so that they can make good investment decisions as future junior managers in the company.
Module content:	1. introduction 2. dynamic methods of investment calculation 3. static approximation methods 4. planning of investment and financing programs 5. assessment of investments under multiple targets
Teaching and learning methods:	seminar-based and independent elaboration of selected business investment decisions
Assessment method(s):	term paper
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	64 h lecture
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	Quantitative Methods I to IV
Mandatory prerequisites:	—
Recommended literature:	Bitz, M.: Investition, in: Bitz, M., Domsch, M., Ewert, R., Wagner, F. W. (Ed.): Vahlens Kompendium der Betriebswirtschaftslehre, vol. 1, 5th ed.., Munich, Vahlen, 2005, p. 105-171. Blohm, H., Lüder, K., Schäfer, C.: Investition, 10th ed., Munich, Vahlen, 2013. Breuer, W.: Investition I. Entscheidungen bei Sicherheit, 4th ed., Wiesbaden, Gabler, 2012. Breuer, W.: Investition II. Entscheidungen bei Risiko, Wiesbaden, Gabler, 2001. Eisenführ, F., Foit, K., Kastner, M.: Investitionsrechnung, 14th ed., Aachen, Mainz, 2009. Götze, U.: Investitionsrechnung, 7th ed., Berlin, Springer, 2014. Kruschwitz, L.: Investitionsrechnung, 15th ed., Munich, Oldenbourg, 2019.

	Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	02/2023

4.32 Multivariate Data Analysis

Module number:	4012
Module title in German:	Multivariate Datenanalyse
Module type:	required elective
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	7th semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. Rainer Lenz
Lecturer:	Prof. Dr. Rainer Lenz
Learning outcome:	Students can weigh and perform quantitative analyses with several simultaneously occurring variables on a (usually computationally complex) problem, by researching current methods of multivariate data analysis and dealing with them intensively, in order to be able to later explain real interrelationships or forecast future developments.
Module content:	An insight into a specific field of application and relevant multivariate data analysis tools is provided. These include methods of multivariate statistics (multiple linear and logistic regression, discriminant analysis etc.), classification and decision trees (CART), multidimensional cluster analysis and graph algorithms.
Teaching and learning methods:	Introductory lecture as well as support of the students during the individual processing of a given question from a subfield of multivariate data analysis. The topic will be communicated during the lecture.
Assessment method(s):	portfolio
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	16 h lecture 16 h exercise 32 h practical training 64 h
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	Quantitative Methods I and II
Mandatory prerequisites:	—
Recommended literature:	A. Gelman, J. Hill: Data Analysis using Regression and Multilevel/Hierarchical Models - Analytical Methods for Social Research, Cambridge 2009 M. Aigner: Diskrete Mathematik, Vieweg + Teubner, 2006 J. E. Gentle: Computational statistics (Statistics and Computing), 2009 R. A. Johnson, D. W. Wichern: Applied Multivariate Statistical Analysis, Pearson, 2007 Further literature will be communicated during the lecture.
Use of the module in other programs:	—

Particularities:	—
Last update:	03/2022

4.33 Technical Systems and Digitization

Module number:	4140
Module title in German:	Technische Systeme und Digitalisierung
Module type:	required elective
ECTS credits:	6
Language:	German
Duration:	one semester
Recommended for:	7th semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. rer. nat. Franz Josef Weiper
Lecturer:	Prof. Dr. rer. nat. Franz Josef Weiper
Learning outcome:	The students understand basic procedures for digitization and automation of business management processes by identifying potential for increasing efficiency along the logistics chain and understanding and practically applying digitization techniques in order to understand and design digitization strategies and corresponding transformation processes in companies.
Module content:	• fundamentals of digitization • selected case studies on digital processes along the logistics chain • tutorials and practical exercises on selected topics such as AI, IoT, BI, RPA, VR/AR, agents, chatbots, and…
Teaching and learning methods:	on-site and seminar-based teaching, practical exercises
Assessment method(s):	documentation of learning progress in the form of a portfolio of exercises
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	32 h lecture 32 h practical training 64 h
preparation and follow-up:	116 h
exam preparation:	—
Recommended prerequisites:	Logistics IT and ERP systems
Mandatory prerequisites:	—
Recommended literature:	lecture script Reimund Neugebauer, Digitalisierung, Schlüsseltechnologien für Wirtschaft und Gesellschaft, Springer Vieweg, 2018 Hartmut Hirsch-Kreinsen, Anemari Karačić (Ed.), Autonome Systeme und Arbeit, transcript Verlag, 2019 Sascha Zöller, Ja zur Digitalisierung, Springer Gabler, 2019 Lämmel, U. / Cleve, J., Künstliche Intelligenz, Hanser, 2012. Craig Le Clair, Robotic Process Automation, Forrester Research, 2018

	Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	Production and Logistics, B. Eng.
Particularities:	—
Last update:	03/2022

Soft Skills Development and Management Techniques

English

4.34 English I (Economy, Accounting and Finance)

Module number:	Economy: 5011 Accounting and Finance: 5012
Module title:	English I (Economy, Accounting and Finance)
Module type:	obligatory module
ECTS credits:	6
Language:	English
Duration:	two semesters
Recommended for:	1st and 2nd semester
Frequency:	starts each winter semester
Responsible:	Anke Vollmer, M.A.
Lecturer:	Anke Vollmer, M.A.
Learning outcome:	The students • know basic concepts of the economics and economics in English by developing, summarizing and discussing technical texts on economic topics, in order to be able to describe and classify basic economic and social contexts (globalization, sustainability, etc.), • can express themselves in English about private and professional fundamental topics by discussing and debating questions in group work in various scenarios, in order to gain basic confidence in oral expression with regard to the life and professional world as well as important social and societal aspects and to articulate their view and approach conclusively and convincingly, • know the difference between General English and Business English as well as formal and informal language, and are able to write, understand and relate texts on topics relevant to business and society in a university context, • gain knowledge of potential pitfalls in intercultural communication by assuming roles and ways of thinking in an international context in order to later encounter others in a sensitive, tolerant and linguistically adequate manner (*tentative language*), • can describe trends and developments by examining diagrams and using the necessary language skills to describe and interpret changes in the economy/society/company/project etc. in English, • know the basic terminology of the financial world and can define, describe and discuss technical terms from the banking industry in order to take a stand on related topics (income and expenditure, income gap, consumer behavior, etc.), • can refresh and consolidate research knowledge and writing techniques in the foreign language, and acquire, evaluate and present basic knowledge on current topics by researching current financial topics (contactless payment, financial crisis, tariff policies, etc.) and formulating an appropriate technical text to be used later in writing appropriate texts for university and professional life, • can promote products to potential investors in a role play or, as a potential investor, react to a product pitch and answer/ask critical questions by analyzing a product pitch as an example and identifying the related linguistic means to present themselves or their ideas in a winning and professional way in English.

Module content:	reading and discussing relevant texts, discussions and short lectures, special exercises on frequently occurring grammar mistakes, general linguistic confidence, Business English (telephoning, describing diagrams, writing short reports, quoting, etc.). Submodule 1.1: Focus: Economy (1st semester) Submodule 1.2: Focus: Accounting and Finance (2nd semester)
Teaching and learning methods:	practical exercises/interactive seminars in small groups (compulsory attendance), the language of instruction is English
Assessment method(s):	oral participation and presentation (submodule 1.1); oral participation and examination (submodule 1.2). Each submodule must be pass. The grade of the module consists of 50% of each of the two submodules. The written examination is offered twice during the academic year.
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (2 semester hours per week / semester)	64 h seminar
preparation and follow-up:	76 h
exam preparation:	40 h
Recommended prerequisites:	Knowledge of the English language according to a technical university qualification (“Fachhochschulqualifikation”) **Level B 1** according to CEFR.
Mandatory prerequisites:	The passed submodule 1.1 is a prerequisite for the submodule 1.2.
Recommended literature:	German-English dictionary, e.g.: Benz, W./Benz, C./Wessels, D.: Wörterbuch Logistik Deutsch-Englisch, latest ed., Berlin. Scott-Sabic, V.: Logistik-Wörterbuch. Deutsch-Englisch. Englisch-Deutsch, latest ed., Berlin. Also available as an e-book. https://www.oxfordlearnersdictionaries.com (oald8.com) https://dictionary.cambridge.org/ https://macmillandictionary.com Further literature recommendations are communicated during the lecture.
Use of the module in other programs:	—
Particularities:	attendance is obligatory; the language of instruction is English
Last update:	03/2022

4.35 English II (Sales and Marketing, Logistics)

Module number:	Sales and Marketing: 5021 Logistics: 5022
Module title:	English II (Sales and Marketing, Logistics)
Module type:	obligatory module
ECTS credits:	6
Language:	English
Duration:	two semesters
Recommended for:	3rd and 4th semester
Frequency:	starts each winter semester
Responsible:	Anke Vollmer, M.A.
Lecturer:	Anke Vollmer, M.A.
Learning outcome:	The students • know basic English marketing and sales terminology by developing, summarizing and discussing case studies and technical texts, in order to be able to describe, classify and apply basic marketing aspects in the professional world in English, • can describe and analyze international commercials by selecting suitable spots and comparing their effectiveness based on self-developed quality criteria, so that they can later plan their own advertisements and marketing campaigns more efficiently or, as consumers, are able to understand advertising more precisely (and express both adequately in English), • are able to conduct and analyze meetings in English by comparing the different criteria for all participants in role plays and by identifying and using appropriate language in order to be able to successfully participate in or lead meetings in an international context (*discourse management, active listening*), • can describe problems with e.g. products or ideas in English and ask questions appropriately, express understanding and willingness to help, and suggest solutions by examining the linguistic means used for this purpose in an exemplary manner and applying them in group work in order to later master these business or social skills with confidence, • can appropriately formulate, present and discuss essays in bigger groups on logistical issues by reading, writing and comparing them in order to be able to present their points of view and rearrange their thoughts appropriately, efficiently and accurately, • can apply research skills and writing techniques in the foreign language and acquire, evaluate and present basic knowledge on current topics by conducting research on current logistics issues and formulating an appropriate presentation in order to be able to give appropriate presentations and discussions at university and at work later on and to moderate and comment on related question-and-answer sessions (including correct citation of sources), • can use grammar and typical vocabulary anchored at B2 level confidently by examining current relevant texts for the most important structures and using these more frequently in spoken and written form to create and justify coherent texts and presentations, thus ensuring lasting learning success.
Module content:	reading and discussing texts and videos with organizational and technical content on logistical issues, answering questions on text content, discussions, special exercises on common grammar mistakes, meetings. The fundamentals of scientific work are taught (see section Study objectives). Submodule 2.1: Focus: Sales and Marketing (3rd semester) Submodule 2.2: Focus: Logistics (4th semester)

Teaching and learning methods:	practical exercises/interactive seminars in small groups (compulsory attendance), the language of instruction is English
Assessment method(s):	oral participation and examination (submodule 2.1); oral participation and examination (submodule 2.2). Each submodule must be pass. The grade of the module consists of 50% of each of the two submodules. The written examination is offered twice during the academic year.
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (2 semester hours per week / semester)	64 h seminar
preparation and follow-up:	76 h
exam preparation:	40 h
Recommended prerequisites:	Knowledge of the English language of **level B 2** according to CEFR. Completion of the module "English I".
Mandatory prerequisites:	Passing submodule 2.1 is a prerequisite for the submodule 2.2.
Recommended literature:	German-English dictionary, e.g.: Benz, W./Benz, C./Wessels, D.: Wörterbuch Logistik Deutsch-Englisch, latest ed., Berlin. Scott-Sabic, V.: Logistik-Wörterbuch. Deutsch-Englisch. Englisch-Deutsch, latest ed., Berlin. Also available as an e-book. https://www.oxfordlearnersdictionaries.com (oald8.com) https://dictionary.cambridge.org/ https://macmillandictionary.com Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	attendance is obligatory; the language of instruction is English
Last update:	03/2022

Project Management (5030)

4.36 Project Management I

Module number:	5031
Module title in German:	Projektmanagement I
Module type:	obligatory module
ECTS credits:	3
Language:	German
Duration:	one semester
Recommended for:	1st semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. rer. nat. Kathrin Hesse
Lecturer:	Prof. Jo Spaubeck (associate lecturer)
Learning outcome:	After an active participation in this module, students will be able to demonstrate the essential methodical basics of successful project work and use standardized templates to enable uniform communication, information and control by • applying the fundamentals of project management, • distinguishing the details of project planning, • having knowledge of the most important tools of project management and thus being able to manage a project, • developing control options and checklists for different project phases and use them in a targeted manner, • structuring project completion in a suitable manner in order to develop project plans in the personal and professional environment, proactively manage projects and successfully complete them. [Taxonomy levels (K1) to (K5)]
Module content:	1st semester: Project Management I In addition to social skills, the course covers aspects for social commitment and includes the following topics: • fundamentals of Project Management: terms / special features of projects / types / project phase models • project organization • project planning: work breakdown structure / cost plan / resource plan / schedule • imparting the fundamentals of scientific work (see section Study objectives) Students acquire theoretical and practical knowledge of methods that enable them to adapt to the requirements of a team.
Teaching and learning methods:	on-site teaching (lecture), learning in small groups (exercises), technical discussion (individual).
Assessment method(s):	homework or project work as examination requirements and an oral examination. The examination is offered twice during the academic year.
Workload (25 to 30 h ≙ 1 ECTS credit):	90 h
courses (2 semester hours per week / semester)	16 h lecture 16 h practical training

	32 h
preparation and follow-up:	32 h
exam preparation:	26 h
Recommended prerequisites:	In the lecture we consciously pay attention to the linkage with already learned contents. Thereby, already acquired competences are specifically activated among the students.
Mandatory prerequisites:	—
Recommended literature:	Clamp, H.: Projekte zum Erfolg führen. Projektmanagement systematisch und kompakt, Deutscher Taschenbuchverlag, 2010. Patzak, G./Rattay, G.: Projektmanagement. Leitfaden zum Management von Projekten, Projektportfolios und projektorientierten Unternehmen, Linde Verlag, 2008. Litke, H.-D.: Projektmanagement - Methoden, Techniken, Verhaltensweisen, Carl Hanser Verlag, 2007. Gareis, R.: Projektmanagement im Maschinen- und Anlagenbau, Vienna 2004. A Guide to Project Management Body of Knowledge, 3rd ed., Project Management Institute, 2005. Litke, H.-D./Kunow, I.: Projektmanagement, Freiburg 2004. Fiddler, R.: Controlling von Projekten. Projektplanung, Projektsteuerung und Projektkontrolle, 2nd ed., Brunswick/Wiesbaden 2003. Preißner: Projekte budgetieren und planen, Berlin/Heidelberg 2003. https://www.business-wissen.de/artikel/projektmanagement-der-ideale-ablauf-eines-projekts-am-beispiel-online-marketing/ https://www.staufenbiel.de/magazin/assessment-center/fallstudien/case-study-windstrom-ag.html https://www.evosult.de/referenzen/fallstudien/ Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	03/2022

4.37 Project Management II

Module number:	5032
Module title in German:	Projektmanagement II
Module type:	obligatory module
ECTS credits:	3
Language:	German
Duration:	one semester
Recommended for:	2nd semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr. rer. nat. Kathrin Hesse
Lecturer:	Prof. Jo Spaubeck (associate lecturer)
Learning outcome:	After active participation in this module, students will be able to demonstrate the essential methodical basics of successful project work and use standardized templates to enable uniform communication, information and control by • applying elementary components of project controlling (controlling the degree of completion, cost controlling, milestone controlling), • distinguishing project controlling methods from different sectors, • forming teams, • conducting the moderation of team sessions, • using tools of computer-aided project management, • developing control options and checklists for different project phases and use them in a targeted manner, in order to develop project plans in the personal and professional environment, proactively manage projects and successfully complete them. [Taxonomy levels (K1) to (K5)]
Module content:	2nd semester: Project Management II The module Project Management II is the advanced module of the module Project Management I. In addition to social skills, the course content covers aspects of social commitment. Students acquire theoretical and practical knowledge of methods that enable them to adapt to the requirements of a team. The module Project Management II focuses on project documentation, project controlling and the connection to planning methods. Furthermore, key aspects of personnel management regarding project management are covered.
Teaching and learning methods:	on-site teaching: seminar-based teaching (lecture, exercises, seminar with independent presentation), learning in small groups and conducting a case study.
Assessment method(s):	homework or project work as examination requirements and an oral examination. The examination is offered twice during the academic year.
Workload (25 to 30 h ≙ 1 ECTS credit):	90 h
courses (2 semester hours per week / semester)	16 h lecture 16 h practical training 32 h

preparation and follow-up:	32 h
exam preparation:	26 h
Recommended prerequisites:	Project Management I In the lecture we consciously pay attention to the linkage with already learned contents. Thereby, already acquired competences are specifically activated among the students.
Mandatory prerequisites:	—
Recommended literature:	Clamp, H.: Projekte zum Erfolg führen. Projektmanagement systematisch und kompakt, Deutscher Taschenbuchverlag, 2010. Patzak, G./Rattay, G.: Projektmanagement. Leitfaden zum Management von Projekten, Projektportfolios und projektorientierten Unternehmen, Linde Verlag, 2008. Litke, H.-D.: Projektmanagement - Methoden, Techniken, Verhaltensweisen, Carl Hanser Verlag, 2007. A Guide to Project Management Body of Knowledge, 3rd ed., Project Management Institute, 2005. Fiddler, R.: Controlling von Projekten. Projektplanung, Projektsteuerung und Projektkontrolle, 2nd ed., Brunswick/Wiesbaden 2003. Preißner: Projekte budgetieren und planen, Berlin/Heidelberg 2003. https://www.business-wissen.de/artikel/projektmanagement-der-ideale-ablauf-eines-projekts-am-beispiel-online-marketing/ https://www.staufenbiel.de/magazin/assessment-center/fallstudien/case-study-windstrom-ag.html https://www.evosult.de/referenzen/fallstudien/ Further literature recommendations will be communicated during the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	03/2022

Communication and Presentation Techniques

4.38 Communication and Presentation Techniques I

Module number:	5041
Module title in German:	Kommunikations- und Präsentationstechniken I
Module type:	obligatory module
ECTS credits:	3
Language:	German
Duration:	one semester
Recommended for:	3rd semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. Michael Lorth
Lecturer:	Thomas Schommers (associate lecturer)
Learning outcome:	After active participation in this module/seminar, students can actively and purposefully structure, design and perform communication processes by • classifying the respective communicative tasks in their frame of reference and action according to the situation or occasion, • analyzing or defining the specific communication requirements and objectives, • developing communication strategies based on this and • putting them into practice by using communicative methods and instruments as well as suitable media, in order to be able to handle communicative tasks in the personal and professional environment in a manner appropriate to the situation and addressee. In addition, students acquire the fundamentals of online communication tools (videoconferencing tools), the fundamentals of writing a press release and the fundamentals of crisis communication. [Taxonomy levels (K1) to (K5)]
Module content:	• fundamentals of online communication tools (video conferencing tools) • fundamentals of communication and information (sender-receiver model) • fundamentals of the communication quadrant according to Friedemann Schulz von Thun • fundamentals of the 5 axioms according to Paul Watzlawick • comparison of the models of Schulz von Thun and Watzlawick • Eisberg-Modell • I-Communication • differentiation of basic needs and requirements • active listening • feedback according to the Johari Window according to Joseph Luft and Harry Ingham • fundamentals of questioning techniques • body language • elevator pitch • press release • fundamentals of crisis communication
Teaching and learning methods:	combination of seminar-based teaching, case analyses/studies, exercises and communication process simulations (role plays).
Assessment method(s):	Performance test according to § 22 para. 5 PO degree program Logistics B. Sc. Specific information on the scope, procedure and content of individual examination elements will be communicated at the beginning of the lecture.

Workload (25 to 30 h ≙ 1 ECTS credit):	90 h
courses (2 semester hours per week / semester)	16 h lecture 16 h exercise 32 h
preparation and follow-up:	38 h
exam preparation:	20 h
Recommended prerequisites:	—
Mandatory prerequisites:	—
Recommended literature:	Schulz von Thun, Friedemann (2017): Miteinander reden, 1: Störungen und Klärungen, 54th ed., Reinbek bei Hamburg: Rowohlt Schulz von Thun, Friedemann (2017): Miteinander reden, 2: Stile, Werte und Persönlichkeitsentwicklung, 36th ed., Reinbek bei Hamburg: Rowohlt Schulz von Thun, Friedemann (2016): Miteinander reden, 3: Das "innere Team" und situationsgerechte Kommunikation, 25th ed., Reinbek bei Hamburg: Rowohlt Schulz von Thun, Friedemann (2016): Miteinander reden, 4: Fragen und Antworten, 7th ed., Reinbek bei Hamburg: Rowohlt Watzlawick, Paul (2016): Man kann nicht nicht kommunizieren: das Lesebuch, 2nd unrevised ed., Bern: Hogrefe. Hanisch, Horst (2016): Moderation ist Gold: Grundlagen der effizienten Leitung von Gesprächsrunden: Gesprächsführung, Umfragen, Talkrunden und Manipulation, 4th ed., Norderstedt: Books on Demand. Hanisch, Horst (2016): Körpersprache und ihre Geheimnisse: Was die Sprache des Körpers verrät – und wie sie gedeutet werden kann., Überarbeitete, 4th ed., Norderstedt: Books on Demand. Depending on specific topics and tasks, further source references will be communicated at the beginning of the lecture.
Use of the module in other programs:	—
Particularities:	—
Last update:	03/2022

4.39 Communication and Presentation Techniques II

Module number:	5042
Module title in German:	Kommunikations- und Präsentationstechniken II
Module type:	obligatory module
ECTS credits:	3
Language:	German
Duration:	one semester
Recommended for:	4th semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr. Michael Lorth
Lecturer:	Thomas Schommers (associate lecturer)
Learning outcome:	After an active participation in this module/seminar, students can structure and conduct presentations both in terms of content and design, by • classifying the respective tasks in their frame of reference and action according to the situation or occasion, • analyzing or defining the specific requirements and objectives for creating and holding presentations, • developing presentation strategies based on this and • implementing these simultaneously and in practice using presentation methods and instruments and appropriate (and multiple) media, • structuring the time management for a presentation correctly, in order to be able to hold presentations in the personal and professional environment appropriate to the situation and addressee. In addition, students gain basic knowledge of online collaboration tools and advanced knowledge of online communication tools (video conferencing tools). [Taxonomy levels (K1) to (K5)]
Module content:	• fundamentals of presentation design (PowerPoint): o color selection and design, font sizes and typeface, page layout o animations, graphics and effects o corporate design and conclusion • presentation techniques • handling the flip chart, visualizing • presentation structure, structure for freely held presentations • analysis of presentations • collaboration tools • advanced application of online communication tools (video conferencing tools)
Teaching and learning methods:	combination of seminar-based teaching, case analyses/studies, exercises and communication process simulations (role plays).
Assessment method(s):	Performance test according to § 22 para. 5 PO degree program Logistics B. Sc. Specific information on the scope, procedure and content of individual examination elements will be communicated at the beginning of the lectures.
Workload (25 to 30 h ≙ 1 ECTS credit):	90 h
courses (2 semester hours per week / semester)	16 h lecture 16 h exercise

	32 h
preparation and follow-up:	38 h
exam preparation:	20 h
Recommended prerequisites:	Communication and Presentation Techniques I
Mandatory prerequisites:	—
Recommended literature:	Herbig, Albert F. (2014): Vortrags- und Präsentationstechnik: erfolgreich und professionell vortragen und präsentieren. 3rd completely revised ed., Norderstedt: Books on Demand Hermann-Ruess, Anita (2018): Speak limbic - wirkungsvoll präsentieren: Präsentationen effektiv vorbereiten, überzeugend inszenieren und erfolgreich durchführen, 3rd unrevised ed.. Göttingen: BusinessVillage Garten, Matthias (2015): Präsentationen erfolgreich gestalten und halten: wie Sie mit starker Wirkung präsentieren, 2nd ed., Offenbach am Main: GABAL Seifert, Josef W. (2018): Visualisieren, Präsentieren, Moderieren, 39th ed., Offenbach: GABAL Seibold, Brigitte (2012): Visualisieren leicht gemacht. Talentfrei Zeichnen lernen und professionelle Flipcharts erstellen, Offenbach: GABAL-Verlag (Business) Borbonus, René (2016): Die Kunst der Präsentation. Sich glaubwürdig vor anderen darstellen; ohne Show-Business, 4th ed., s.l.: Junfermann Ulrich, Stephan (2009): Menschen grafisch visualisieren. 43 Fragen und Antworten zum Thema grafische Visualisierung, Paderborn: Junfermann Schulz von Thun, Friedemann (2017): Miteinander reden, 1: Störungen und Klärungen, 54th ed., Reinbek bei Hamburg: Rowohlt Schulz von Thun, Friedemann (2017): Miteinander reden, 2: Stile, Werte und Persönlichkeitsentwicklung, 36th ed., Reinbek bei Hamburg: Rowohlt Schulz von Thun, Friedemann (2016): Miteinander reden, 3: Das "innere Team" und situationsgerechte Kommunikation, 25th ed., Reinbek bei Hamburg: Rowohlt Schulz von Thun, Friedemann (2016): Miteinander reden, 4: Fragen und Antworten, 7th ed., Reinbek bei Hamburg: Rowohlt Watzlawick, Paul (2016): Man kann nicht nicht kommunizieren: das Lesebuch, 2nd unrevised ed., Bern: Hogrefe. Hanisch, Horst (2016): Moderation ist Gold: Grundlagen der effizienten Leitung von Gesprächsrunden: Gesprächsführung, Umfragen, Talkrunden und Manipulation, 4th ed., Norderstedt: Books on Demand. Hanisch, Horst (2016): Körpersprache und ihre Geheimnisse: Was die Sprache des Körpers verrät – und wie sie gedeutet werden kann., Überarbeitete, 4th ed., Norderstedt: Books on Demand. Depending on specific topics and tasks, further source references will be communicated at the beginning of the lectures.
Use of the module in other programs:	—
Particularities:	—
Last update:	03/2022

Conflict Resolution and Negotiation Techniques

4.40 Conflict Resolution and Negotiation

Module number:	5050
Module title in German:	Konfliktlösungs- und Verhandlungstechniken
Module type:	obligatory module
ECTS credits:	6
Language:	German
Duration:	16 weeks (per semester)
Recommended for:	7th semester
Frequency:	once per academic year in the winter semester (alternatively each semester in the competence workshop in the degree programs Business Administration B. Sc. and Business Law LL.B. of the Faculty 04)
Responsible:	Prof. Dr. Michael Lorth
Lecturer:	Prof. Dr. Michael Lorth, Prof. Dr. Ricarda Rolf
Learning outcome:	After active participation in this module/seminar, students will be able to handle conflict cases and situations appropriately and conduct negotiations independently by using an active cognitive process ▪ classify the respective conflict and/or negotiation situation in its context or framework for action, ▪ analyze the needs, interests and objectives of the conflict or negotiation parties and derive a target-means construct, ▪ develop and implement a conflict resolution or negotiation strategy and tactics concept suitable for the target-means construct within the corresponding framework by means of a suitable analog and digital communication and interaction process, ▪ review from a critical distance both the chosen framework for action and the developed target-means construct and, if necessary, adjust them in an appropriate manner, in order to be able to control and solve conflicts (of interest) occurring in the private or professional environment and to pursue one's own interests or the interests of third parties in negotiations in a goal- or result-oriented manner. [Taxonomy levels (K1) to (K6)]
Module content:	1. The nature and the different basic characteristics of conflicts 1.1. types, causes and objects of conflicts 1.2. recognize and understand conflicts 1.3. escalation dynamics 2. conflict resolution and management (with exercises) 2.1. objective and method selection 2.2. typical behavior patterns in conflict situations 2.3. moderation and coaching 2.4. conflict resolution discussion 2.5. court, conciliation and arbitration proceedings 2.6. mediation 2.7. negotiation 2.8. personality styles/conflict types and anger management strategies 2.9. communication models and communication techniques in conflict situations 3. advanced practical exercises in conflict resolution and resolution techniques 4. conflict resolution through negotiations: fundamentals of negotiation techniques (with exercises) 4.1. Which characteristics constitute a negotiation (situation): the nature of negotiations

	4.2. role and importance of interdependence 4.3. Division/distribution conflicts as (distributive) negotiation problem: distributive vs. integrative negotiations 4.4. the negotiation process 4.4.1. preparation phase 4.4.2. welcoming and getting-to-know phase 4.4.3. core phase 4.4.4. agreement and conclusion phase 4.4.5. implementation phase 4.5. strategic choice and tactical tasks of the negotiation 4.5.1. definition of negotiation goals 4.5.2. determination of the negotiation strategy 4.5.3. tactical tasks for the distributive negotiation 4.5.4. tactical tasks for the integrative negotiation 5. advanced practical exercises in negotiation preparation and conducting
Teaching and learning methods:	a combination of seminar-based teaching, analog and digital teaching/learning content, analog and/or virtual-digital collaboration in teams with workshop elements, case analyses/studies and numerous simulated conflict/negotiation situations and role plays with consistent application of the principle of inquiry-based learning as well as the problem-oriented approach (problem-solving cycle)
Assessment method(s):	Performance test according to § 22 para. 5 PO degree program Logistics B. Sc. In addition to the development and implementation of a systematic and problem-oriented approach (problem-solving cycle) and a clearly structured analog and/or digital case and team management, the performance test in this module includes ▪ oral examination elements (case descriptions and analyses, role plays, active analog and digital communication and collaboration in teams, ad-hoc presentation of (group) work results) and ▪ written examination elements (case descriptions and analyses, research, concept development for procedures in simulated conflict and negotiation situations, case documentation, portfolio, submission in digital format).
Workload (25 to 30 h ≙ 1 ECTS credit):	180 h
courses (4 semester hours per week)	32 h lecture 32 h exercise 64 h
preparation and follow-up:	116 h (especially case analyses/processing in parallel/in addition to the courses)
exam preparation:	—
Recommended prerequisites:	—
Mandatory prerequisites:	—
Recommended literature:	Fundamental literature: Bühring-Uhle, C.; Eidenmüller, H.; Nelle, A. (2017): Verhandlungsmanagement: Analyse, Werkzeuge, Strategien, Munich: Beck im dtv (dtv Verlagsgesellschaft). Fisher, R.; Ury, W.; Patton, B. (1991/2012): Getting to Yes: Negotiating Agreement Without Giving In, 3rd ed., London: Random House Business. Glasl, F. (2020): Konfliktmanagement: Ein Handbuch für Führung, Beratung und Mediation,, 12. ed, Stuttgart: Verlag Freies Geistesleben. Lewicki, R. J.; Saunders, D.M., Barry, B. (2010): Negotiation, 6th ed., Boston et al.: McGraw-Hill/Irwin. Supplementary and further literature:

Budjac Corvette, B. A. (2007): Conflict Management: A Practical Guide to Developing Negotiation Strategies, Upper Saddle River: Pearson Prentice Hall.

DeMarr, B.; De Janasz, S. (2014): Negotiation and Dispute Resolution, Pearson New International Ed., Harlow: Pearson Education Ltd.

Erbacher, C. E. (2005): Grundzüge der Verhandlungsführung, Zürich: vdf Hochschulverlag.

Haft, F.; Schlieffen, K. Gräfin von (Ed.) (2015): Handbuch Mediation: Verhandlungstechnik, Strategien, Einsatzgebiete, 3rd ed., Munich: C.H. Beck.

Hocker, J. L.; Berry, K.; Wilmot, W. W. (2022): Interpersonal Conflict, 11th ed., New York: McGraw-Hill.

Raiffa, H. (2002): Negotiation Analysis: The Science and Art of Collaborative Decision Making, Cambrigde, London.

Saner, R.: Verhandlungstechnik: Strategie, Taktik, Motivation, Verhalten, Delegationsführung, 2nd ed., Bern et al.: Haupt Verlag.

Schulz von Thun, F. (2010/2013): Miteinander reden, volumes 1-3;

Volume 1: Störungen und Klärungen. Allgemeine Psychologie der Kommunikation, 48th ed., Reinbek 2010;

Volume 2: Stile, Werte und Persönlichkeitsentwicklung; Differentielle Psychologie der Kommunikation, 33th ed., Reinbek 2010;

Volume 3: Das "Innere Team" und situationsgerechte Kommunikation, 22th ed., Reinbek 2013.

Thompson, L. L. (2013): The Truth About Negotiations, 2nd ed., Upper Saddle River: Pearson Education.

Thompson, L. L. (2014): The Mind and Heart of the Negotiator, Pearson New International Ed., 5th ed., Harlow: Pearson Education Limited.

If necessary, further bibliography will be communicated at the beginning of the lecture.

Use of the module in other programs:	Business Administration B. Sc., Business Law LL. B.
Particularities:	The courses in the module "Conflict Resolution and Negotiation Techniques" are designed as seminar-based lecture(s) with analog and digital teaching/learning content, analog and virtual-digital collaboration in teams as well as with workshop elements, case analyses/studies and numerous simulated conflict and negotiation situations or role plays. The basic knowledge is conveyed to the students by the lecturers in an interactive lecture format and is discussed together. In the exercise sessions, individuals or groups of students are confronted with concrete conflict and/or negotiation situations which they must analyze and classify independently applying the methods they have learned, as well as mastering them within the framework of a conflict resolution or negotiation process which they have to organize independently (extended role plays). At the same time, different conflict resolution methods and/or negotiation strategies can be tried out in the interaction process and different communication styles and selected negotiation tactics can be tested in application and effect and can be modified if necessary. In addition, each module/seminar participant must write and submit an individual self-reflection after the first half and at the end of the lecture in which his/her own learning process and the learning outcomes achieved through his/her own commitment during the seminar are reflected. The assessment of exam performance in this module is based on the extent to which specific competency-based performance standards (requirements) are met, which are determined based on the Level and Process Level matrix according to Anderson/Krathwohl (2001). **Please note**: Both the teaching concept and the fully extended form of examination (performance test) require continuous attendance and active participation in the courses as well as in the project or case study team meetings.

Last update:	03/2023

Internship Semester

4.41 Internship Semester

Module number:	9040
Module title in German:	Praxissemester
Module type:	obligatory module
ECTS credits:	30
Language:	German
Duration:	22 Weeks (full-time activity)
Recommended for:	6th semester
Frequency:	only in the summer semester
Responsible:	Prof. Dr.-Ing. Christoph S. Zoller
Lecturer:	supervision by all logistics lecturers of the Institute of Production (Faculty 08) and the Schmalenbach Institute of Economics (Faculty 04)
Learning outcome:	The students can orientate themselves in the desired occupational field of production engineering or logistics and gain an insight into future occupational fields • by applying the technical knowledge acquired during their studies to a concrete task in a problem-oriented way and • by finding solutions and documenting and justifying their experiences and results in an appropriate and comprehensible way in order to be able to continue their studies in a target-oriented manner and to classify and critically evaluate practical, engineering and business management topics in a team.
Module content:	• engineering and commercial organizational activities • Content is determined by the respective employer.
Teaching and learning methods:	internship in a company as well as pre- and post-preparation workshops.
Assessment method(s):	20-page internship semester report
Workload (25 to 30 h ≙ 1 ECTS credit):	22 weeks full-time
courses:	—
preparation and follow-up:	—
exam preparation:	—
Recommended prerequisites:	see examination regulations of the program and in particular the internship semester regulations.
Mandatory prerequisites:	see examination regulations of the program and in particular the internship semester regulations.
Recommended literature:	—
Use of the module in other programs:	—
Particularities:	—

Last update:	03/2022

Case Studies in Logistics Management

4.42 Project

Module number:	0943
Module title in German:	Projekt
Module type:	obligatory module
ECTS credits:	12
Language:	German
Duration:	max. 6 months
Recommended for:	5th semester
Frequency:	only in the winter semester
Responsible:	Prof. Dr. Zelal Ates
Lecturer:	supervision by all logistics lecturers of the Institute of Production (Faculty 08) and the Schmalenbach Institute of Economics (Faculty 04)
Learning outcome:	The students analyze a business management question from practical experience and develop and present well-founded and suitable solutions for it, • by planning and implementing a structured and scientifically sound approach in group work based on efficient and effective project management, and • by applying the knowledge acquired during their studies in a problem-oriented manner, in order to be able to critically assess and improve operational processes in practice later on the basis of current knowledge.
Module content:	Alternating problems from the whole range of business management tasks. Students analyze the complex problems from operational practice under the guidance of the lecturers and a solution is found. The project work is intended to provide economic benefits for companies. For example, the following (fundamental) elaboration questions can be considered: • analyses • recommendations • decision preparation • development of criteria catalogs (specifications, requirement specifications) • feasibility studies • market surveys • considerations for selection issues • studies of possible measures regarding the advantages and disadvantages • opportunities for improvement (in terms of facts and processes) • economic considerations • profitability calculations
Teaching and learning methods:	The students work mostly independently. The task of the lecturer is to explain the project task, to moderate the process and to ensure the quality of the work. • seminar-based lecture (explanation of the case study) and coaching. • Elaboration of problem solutions and presentation by the students on different levels.
Assessment method(s):	term paper
Workload (25 to 30 h ≙ 1 ECTS credit):	360 h project

courses:	—
preparation and follow-up:	—
exam preparation:	—
Recommended prerequisites:	Project Management
Mandatory prerequisites:	—
Recommended literature:	—
Use of the module in other programs:	—
Particularities:	—
Last update:	03/2022

Bachelor's Thesis

4.43 Bachelor's Thesis

Module number:	0950
Module title in German:	Bachelorarbeit
Module type:	obligatory module
ECTS credits:	12
Language:	German
Duration:	13 weeks
Recommended for:	7th semester
Frequency:	every semester
Responsible:	Prof. Dr. rer. pol. Stephan Freichel
Lecturer:	supervision by all logistics lecturers of the Institute of Production (Faculty 08) and the Schmalenbach Institute of Economics (Faculty 04)
Learning outcome:	The Bachelor's Thesis pursues the following learning objectives by working on a scientific task in the form of an examination paper: The students are able • to work independently by deciding on the topic, structure, methodology and sources of the work so that they can later systematize and evaluate topics and priorities independently. • to apply the technical knowledge and scientific methods learned during their studies in a problem-oriented manner by choosing main topics and commenting on them in order to be able to assess relevant facts later on. • to think in interdisciplinary contexts by combining elements from different disciplines of the learned modules in order to later identify interdisciplinary interactions and to develop and classify measures. • to organize independent project planning and time management as well as to finish the given tasks in due time. They select and individually evaluate methods of corresponding pre-trained modules in a target-oriented manner in order to be able to decide independently about the scope and characteristics of projects and work tasks later on. • to critically review and document the results by following scientifically sound methods, models and protocols and thus evaluate results in order to be able to later properly assess and make statements and decisions.
Module content:	The bachelor thesis is usually an independent research project with an organizational, economic or technical task from the fields of logistics, business administration or industrial engineering with an adequate written description and explanation. In technically appropriate cases it can also be a written term paper with technical literary content.
Teaching and learning methods:	Independent execution of the task with minimal instruction by the lecturer.
Assessment method(s):	Written documentation of the results of the bachelor thesis.
Workload (25 to 30 h ≙ 1 ECTS credit):	420 h
Elaboration and documentation:	360 h
Recommended prerequisites:	—

Mandatory prerequisites:	See the examination regulations of the program.
Recommended literature:	depends on the topic of the project
Use of the module in other programs:	—
Particularities:	—
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