

### Logistics/Business Studies – Bachelor

The increase in international division of labour, as well as the further intensification of international competition has forced companies to activate all potential for cost and performance optimisation. Over the past years logistics as a corporate function has become more and more important. The main aim of logistics is on the one hand to positively influence purchase decisive factors such as availability and short reaction and delivery times and on the other hand to minimise the costs which result from this high level of service. Accordingly, logistics concepts have to be developed and implemented. With the help of particularly advanced concepts it is even possible to increase the service degree and decrease the costs at the same time.

The starting point of logistical optimisation is normally the own company in which the information and material flows are designed in a process-oriented way. A consistent process and flow orientation does not stop at the borders of a company or a country but also attempts to answer the question of the optimum depth of service of the company and the share of outsourcing and to optimise also the processes of the suppliers as well as the costumers. The classical logistics service providers have to increasingly react and logistically optimise their service offers. This means for the freight forwarder that he does not only offer a service "space bridging" but that he becomes an element in a logistical chain, which has to be integrated into an overriding logistics concept. Today, a harbour is not only a place of transshipment but a logistical centre which has a great influence on the efficiency of the whole system, especially concerning the international flow of goods. Particularly for the harbour city Hamburg with its many logistics service providers as well as for industry and trade, logistics is a central factor for the preservation and extension of the competitiveness and finally for the future growth of the region. The skills required in logistics are extensive. A broad knowledge of business management, engineering science and information technology is needed to be able to successfully design and manage logistics systems. Today, additional knowledge in internationalisation and the ability to work in an international context is needed for the success of a logistics manager due to the increasing international division of labour which requires functioning logistics systems. What in the past was an exception due to a strong regional approach of German enterprises is today the normal situation in the course of the globalisation of value-added activities: international and cross-cultural logistics projects and working groups.

The study concept of logistics at the Department of Business considers these requirements to a high degree. The **Bachelor degree programme "Logistics/Business Studies"** not only looks at the technology and business knowledge needed to design and manage a logistics systems but also basic skills for working internationally. The approach of the Logistics Bachelor is oriented towards the requirements of industry and trade companies as well as of logistics service providers such as freight forwarders, warehouse companies, packers or transshipment companies. The graduates will be able to independently work in management in logistics and be promoted to logistics manager or senior manager within a few years. Furthermore, the graduate will be able to work in an international context.

Based on the objective of the Bachelor programme to teach both business administration and technology for future logistics specialists, business and technical lectures make up the core elements of the degree programme, in particular in the **first study segment (semester 1-4)**. Both areas are supplemented in the foundation studies by additional general lectures about all areas of study relevant for understanding corporate processes and business management. The students are equipped with a broad general professional competence in the following areas:

- Business Studies
- Technology
- Economics
- Law
- Accounting / Controlling
- Quantitative Methods
- Business Informatics
- Social Sciences and Management
- English

The **second study segment (semester 5-7)** focuses on professional specialisation. There are core logistics and technology lectures as well as areas of study which are close to logistics and therefore associated with the handling of logistics-related problems. Overall, logistics-oriented questions are additionally dealt with in all areas of the second study segment, in particular in case studies and applications that come mainly from the logistics area.

It is however, important that the degree programme also offers the opportunity to look beyond the study major. Every student must therefore choose a module from the modules in the fields of marketing, international management or business English.

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The acquisition of professional competence and a scientific way of working is an important foundation but is not yet sufficient for a career and leadership ability. Today it is not enough to just do your job. Employees and managers, in particular, are expected to operate in an entrepreneurial way, show initiative, be able to work in a team and be innovative.

The necessary personal skills concentrate on the following key competences:

- Methodology Competence: Networked, integrated and cross-functional thinking, dealing with projects, presentation techniques, autonomous generation of contents, dealing with media
- Social Competence: language, management abilities, team ability, conflict resolution, entrepreneurial and market-orientated behaviour.
- Self Competence: goal-oriented, flexibility, mobility, frustration tolerance, ability to perform and to work under pressure.

In the framework of the degree programme these qualifications are acquired through independent compilation and presentation of study contents, project-oriented work, the use of business games and work in small groups.

In the Bachelor course "Logistics/Business Studies" great importance is also placed on practical experience. This is accomplished in different ways:

- Choice of relevant practical lecture contents
- Application of case studies from practical experience
- Simulation of practical decision and planning situations in group works, business games and project tasks
- Integration of qualified practitioners in teaching in the form of presentations or university teaching positions
- Internships and practical Bachelor-thesis
- Regular contact between teaching staff and company representatives concerning the supervision of interns, Bachelor thesis and in the frame of the development association
- Field trips to companies
- Projects with companies

An important part of the degree programme is the **compulsory internship** that stretches over a semester. This period in industry allows students to apply the theory they have acquired. The department supervises the student during the internship and is in direct contact with the companies. The experiences of the interns are processed in a colloquium and an intern report.

English is offered as a foreign language and students have the opportunity to study or do an internship abroad, in order to gain a more international perspective. The department has university agreements with universities in Europe and overseas. Students also have the opportunity to obtain a double degree in France with the partner university ESC Group Sup de Co Montpellier.

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## Study Plan

Course of study	Module	Semester* / SWS							Exam
		1.	2.	3.	4.	6.	7.		
<b>Semester 1</b>									
Business Studies	Introduction to Marketing and Production Management	6 (8)							K
Accounting	Accounting 1	3 (5)							K, M, S
Technology	Introduction to Technology	4 (5)							K
Law	Civil and Trade Law	6 (8)							K, S, P, H
English	Business English	4 (6)							S, P, H
<b>Semester 2</b>									
Business Studies	Investment and Finance Management		4 (5)						K
Accounting	Accounting 2		3 (5)						K, M, S
Technology	Construction		6 (8)						K
Business Informatics	Business Informatics 1		4 (5)						Ü, S
Quantitative Methods	Mathematics		3 (5)						K
<b>Semester 3</b>									
Logistics	System oriented and Business Foundations of Logistics Management in Industrial and Service Enterprises			6 (8)					K
Social Sciences and Management	Organisation and Human Resource Management			4 (5)					H, M
Economics	Introduction to Economics			4 (5)					K, S
Business Informatics	Business Informatics 2			4 (5)					K, H
Quantitative Methods	Statistics (Lecture and lab)			5 (7)					K, H, P
<b>Semester 4</b>									
Logistics	Phase-specific systems of Logistics				4 (5)				K
Accounting	Controlling 1				4 (5)				K, M, S
Technology	Transport and Packaging Technology				4 (6)				K, Ü
Economics	Economics in Logistics				4 (5)				K
Law	Law in Logistics				4 (5)				S, K, H
English	English in Logistics				2 (3)				H, S, P, K
<b>Semester 5</b>									
Internship in industry									
<b>Semester 6</b>									
Logistics	Total and inter-company logistics concepts					4 (6)			K
Accounting	Controlling 2					2 (3)			K, M, H, P
Technology	Technology in Logistics					4 (6)			K, Ü
Social Sciences and Management	Management in Logistics					4 (6)			K, H
Business Informatics	Business Informatics 3					4 (6)			H, P
Quantitative Methods	Quantitative Methods in Logistics (Lecture and lab)					4 (6)			K, H, P
Elective module Marketing	Marketing research, Marketing planning, Distribution policy					4 (6)			
	Product development, Product management, Price management					4 (6)			
	Communication policy and Sales management					4 (6)			
Elective module Cultural and Social Sciences	Intercultural Communication and Competence					4 (6)			K, P, H
Elective module English	The language of shipping in English – Ports and port operations					4 (6)			S, P
	Selected topics from Logistics					4 (6)			S, P
<b>Semester 7</b>									
Logistics	Logistics in Theory and Practice						4 (6)		Ü, H, P
Business Informatics	Business Informatics 4						2 (4)		K, H
Bachelor Thesis							(12)		
Total									
	Total SWS (CP):	21 (29)	22 (31)	23 (30)	22 (29)	22 (30)	10 (31)		

K: Final exam  
S: Semester test  
P: Presentation

Ü: Exercise  
M: Oral examination  
H: Paper

\* Semester 5: Internship in industry  
SWS = Semester week hours = 45 Minutes  
CP: ECTS Credit Points  
All lectures are In German

### Semester 1

#### **INTRODUCTION TO BUSINESS, MARKETING AND PRODUCTION MANAGEMENT (Semester 1)** **6 hours per week / 8 ECTS credits / language of instruction: German**

The aim of the marketing part is to look at basic theoretical and practical knowledge about marketing; in particular the marketing mix. The contents of the course are the main aspects of the marketing concept, qualitative and quantitative market research, basic models of consumer behaviour, strategic marketing planning methods (product portfolio analysis, product life cycle, positioning) as well as an overview of the marketing mix instruments (product, price, communication and distribution policy).

The aim of the production and logistics part is the transfer of basic knowledge of production management and logistics. The contents of the course are systematisation of production systems, general framework for industrial production, modern production concepts, strategic and operational production management as well as an overview of logistics systems, processes and functions.

#### **ACCOUNTING 1 (Semester 1)** **3 hours per week / 5 ECTS credits / language of instruction: German**

The course introduces the students to external accounting. The students learn to understand and use the external accounting as an important basis for economic activity and orientation. The emphases of this basic module is on obtaining and using the following accounting information which is relevant for business administrators to take decisions: asset, capital and success information as well as the necessary bookings. Furthermore knowledge about the work on preparing annual statements is transferred (inclusion and evaluation of asset and capital positions as well as their impact on the profit and loss account).

#### **INTRODUCTION TO TECHNOLOGY (Semester 1)** **4 hours per week / 5 ECTS credits / language of instruction: German**

In an ever faster changing environment companies must be able to quickly develop products, to be prepared for new challenges on a short-termed basis and to always serve new markets. This is only possible by always working in a more and more interdisciplinary way. If the employees of the business areas of the company are not able to take into consideration technical aspects, the above-mentioned conditions can only be achieved with difficulty. This module – using subjects from engineering studies (here: materials science and production engineering) – therefore looks at the thought and work processes of technical staff as well as the approaches for solving technical problems. Based on scientific exact models students learn how materials are handled and processed. Main materials groups are plastics and metals. Central topics are the materials composition, foundations of metal science, the production and processing of plastics and metals, the characteristics and applications of materials as well as materials parameters respectively materials test procedures. Additionally, production procedures of components will be explained based on examples from production engineering.

#### **CIVIL AND TRADE LAW (Semester 1)** **6 hours per week / 8 ECTS credits / language of instruction: German**

The students will learn to work on and solve simple cases regarding questions of corporate practice and to present the results in discussions by using the acquired knowledge. They should show that they have understood the methodology of juristic case-solving. The content of the course is about justification, realisation (especially defaults) and termination of contracts, especially purchase contracts, peculiarities in trade law and main features of property law.

#### **BUSINESS ENGLISH (Semester 1/2)** **4 hours per week / 6 ECTS credits / language of instruction: English**

The aim of the course is the ability to act adequately in an international context using a foreign language. Further aims are learning autonomy (here: own personal further development in the expert language), the ability to retrieve information from foreign language sources and the ability to present in a professional way. The course deals with methods of foreign language acquisition, learning and reading strategies as well as terms and speech means of Business English. Starting point are English texts on different information carriers about economic topics, which can range from "The sectors of the economy" up to "Entrepreneurship" and which can also cover logistical questions.

### Semester 2

#### **INVESTMENT AND FINANCE MANAGEMENT (Semester 2)**

**4 hours per week / 5 ECTS credits / language of instruction: German**

The course looks at the central business disciplines of investment and finance management as a basis for rational business actions. The main topics introduce the students to investment and finance theory, e.g. knowledge of relevant finance and investment factors and their interrelation as well as dealing with essential investment and finance types and forms, the presentation of the resulting decisive processes, calculation possibilities and business questions (in particular with regard to the introduction of more detailed economic contents and topics).

#### **ACCOUNTING 2 (Semester 2)**

**3 hours per week / 5 ECTS credits / language of instruction: German**

The students learn to understand and use the internal accounting as an important basis for business decisions and efficiency control. One focus of this basic module is the basic design of cost accounting with its elements cost type, cost centre as well as job order cost accounting. Another focus is the possible creation and evaluation of systems for planning and controlling costs.

#### **CONSTRUCTION (Semester 2)**

**4 hours per week / 8 ECTS credits / language of instruction: German**

Based on the foundation of materials and the possibilities of production processes, the construction process is at the centre of corporate research and development. This technical construction process is the focus of the construction module. The individual phases, right up to simple calculations, are explained with examples. The students will learn to design development and production processes together with technicians. They will also learn how to create performance and requirement specifications which define the conditions under which a product will be used. Finally, simple technical drawings can be read and interpreted.

#### **PARTIAL MODULE TECHNICAL DRAWING**

The technical drawing is the main form of communication in technology, integrating all relevant information. The bill of materials is indispensable for managing the processes in manufacturing companies. The technical drawing is created during the development process and is used as a communication tool on which all relevant decisions and changes are based. Together with the bill of materials these two instruments are the basis for production planning and management as well as price formation. The purchasing processes are also based on this. The course is therefore about reading and understanding technical drawings and the compilation and structure of bills of materials. Starting from these documents the creation of work plans, and based on this the cost of production calculation, will be explained. Finally it will be shown, how the technical drawing is anchored in the development process.

#### **PARTIAL MODULE DESIGN ENGINEERING**

The students will learn the procedure for developing technical products. In addition to an introduction to machine elements, the single steps of the construction process will be dealt with, starting with the compilation of the bill of materials, over the concept, calculation and displaying phases up to the prototype and market launch of technical products. It will underline which information forms the basis of the technical development, which instruments are used by the technical areas of companies and what is made available for procurement, production and corporate management. An introduction to machine elements (construction elements, calculation bases, calculation methods) and design (methodical constructing, communication in the development process) will be taught.

#### **BUSINESS INFORMATICS 1 (Semester 2)**

**4 hours per week / 5 ECTS credits / language of instruction: German**

The goal of the course is an introduction to object-based programming, so that the students can analyse tasks, transfer them into program structures and program them. In the lecture the students learn the theory for the assignments e.g. foundations of program development, syntax structures and elements of the programming language currently looked at such as data types, control structures, objects, features, methods, in- and output dialogs und messages, incident-driven programming, procedures, functions, modules, access on databases, debugging and programming help. In the seminar students work independently on assignments, with the level of difficulty increasing during the course.

#### **MATHEMATICS (Semester 2)**

**3 hours per week / 5 ECTS credits / language of instruction: German**

The aim of the class is to enable the students to investigate business problems with mathematical models, representing questions with mathematical models, deriving results from assumptions (solving mathematical models) as well as interpretation of the results. Main topics include operationalisation of questions, finance mathematics, functions, differential calculus, matrices, introduction in linear algebra.

### Semester 3

#### **SYSTEM ORIENTED AND BUSINESS FOUNDATIONS OF LOGISTICS MANAGEMENT IN INDUSTRIAL AND SERVICE ENTERPRISES (Semester 3)**

**6 hours per week / 8 ECTS credits / language of instruction: German**

Logistics is looked at as an integrated planning and management concept which optimises the whole value chain. Students will acquire a basic overview of the subsystems of logistics be able to recognize and describe logistical problems. They will also learn about transport systems, transport chains and carriers as well as analyse transport and traffic problems and find solutions based on customer demand. In addition, the students will gain a deeper knowledge of the structure, role and functions of logistics service companies and their optimum integration of value chains. Single learning objectives are a command of the relevant guidelines and principles of the integrated logistics term, knowledge of the basic elements of a logistics system and the success factors of logistics in global economy systems, knowledge of alternative logistics strategies, the ability to recognise, structure and analyse logistical questions and critically question existing concepts as well as working out new solution concepts. The course deals with system-oriented foundations of logistics including order processing, transport, warehouse, packaging, storage, selected planning and management concepts in logistics as well as process management in logistics. Additionally, business foundations of logistics management are presented consisting of structuring principles of logistics, supply chain model, success factors of logistics, logistics strategies as part of the corporate strategy, internationalisation of logistics, strategy formulation in worldwide supply chains as well as logistics organisation.

#### **ORGANISATION AND HUMAN RESOURCE MANAGEMENT (Semester 3)**

**4 hours per week / 5 ECTS credits / language of instruction: German**

The course introduces the students to Human Resource Management in the areas of socio-scientific organisation theory (leadership/motivation/organisation), the reflexive training of social skills and the ability to analyse social systems and corporate areas of conflict between individuals, groups and organisational units. The course deals with the presentation, differentiation and reflection of the leadership function as a central management task by teaching and discussing the relevant leadership theories. Particularly motivation theories as foundation theories for leadership are chosen as a central theme and their practical importance is discussed. The reflection of the leadership function requires an embedding in fundamental theories of organisational behaviour. The module therefore looks at social and behaviour scientific concepts of organisation science are taught, including group, culture and communication theory. Additionally professional, methodical and social requirements for managers are discussed.

#### **INTRODUCTION TO ECONOMICS (Semester 3)**

**4 hours per week / 5 ECTS credits / language of instruction: German**

In this course students will learn to recognise and understand macroeconomic structures and their relation to individual and business decision-making. In particular students look at a) networked, integrated and cross-functional economical thinking, b) entrepreneurial and market-oriented behaviour in the social market economy as well as c) methodical approaches to problem-solving. Main topics include subject and methods of macroeconomics, circular flow and macroeconomic accounting. The students will also be taught the basics of micro- and macroeconomic knowledge necessary to work on various economic problem areas. The lecture is based on a problem-oriented approach while looking at business theory and policy and establishing concrete and empirical relationships.

#### **BUSINESS INFORMATICS 2 (Semester 3)**

**4 hours per week / 5 ECTS credits / language of instruction: German**

Students learn the foundations of data modelling, database theory and the use of database systems so that they are able to develop databases and database applications in their future field of work. Databases are an essential part of corporate local and internet-based information systems. Based on real application cases, data models are developed, implemented and their usage, e.g. as basis for dynamic web applications, is shown. Main topics are data modelling, database concept, relational database, normalization, foundations SQL, database applications in the internet and ADO techniques.

#### **STATISTICS (LECTURE & LAB) (Semester 3)**

**5 hours per week / 7 ECTS credits / language of instruction: German**

**STATISTICS LECTURE 3 hours per week / 4 ECTS credits**

The students will learn about the applications and limitations of statistical concepts. Main topics include objectives and phases of a statistical examination: planning, investigation, processing and presentation. The students should get to know chosen methods of descriptive statistics. Here included are especially univariate methods for the aggregation of single information and their concise presentation, bivariate methods for displaying two attributes and dependent measures, introduction into time series- and regression analysis, graphical description of concentration like the ABC analysis as well as

value, price and quantity indexes. After visiting this course the students should be enabled to work on business problems with statistical concepts.

### **STATISTICS LAB 2 hours per week / 3 ECTS credits**

In the course of the statistics lab a statistical analysis will be conducted under guidance. The capability to analyse and interpret as well as the ability to work in a team will be trained by project work. Main topics include data analysis, data entry and data verification, application of the statistics software SPSS, data transformation and analysis, presentation of the results in a paper as well as presentation of the results.

## Semester 4

### **PHASE-SPECIFIC SYSTEMS OF LOGISTICS (Semester 4)**

**4 hours per week / 5 ECTS credits / language of instruction: German**

The students will gain a deeper knowledge of decision fields, methods and instruments of procurement, production and distribution logistics. They will be able to structure problems of procurement, production and distribution logistics and to choose and implement appropriate methods, concepts and instruments for problem-solving. The course consists of logistics functions within the company such as purchasing logistics (material disposition, sourcing concepts, supplier management), production logistics (planning of production diversification and depth, location planning, plant structures, material flow design, production planning and steering), distribution logistics (distribution structures and systems, distribution planning and control, outsourcing/integration of logistics service provider in value chains) as well as best practice examples of automotive, aircraft and consumer goods logistics.

### **CONTROLLING 1 (Semester 4)**

**4 hours per week / 5 ECTS credits / language of instruction: German**

The students will get to know controlling as an important basis for the goal-oriented management of companies and the related capability for business thinking. Main topics include term and organisation of controlling, foundations and elements of corporate planning, goal oriented management by key data and key data systems, evaluation of companies, controlling of achievement of objectives, prognosis as well as foundations of reporting.

### **TRANSPORT UND PACKAGING TECHNOLOGY (Semester 4)**

**4 hours per week / 6 ECTS credits / language of instruction: German**

Within the framework of globalisation the purchasing and distribution processes that cross country borders and continents are an ever more important aspect, deciding over market success. In order to be able to work in this field, students need in addition to business skills, knowledge of the technical aspects of the various transportation means as well as of transport, transshipment and warehouse impact on the transported goods and the possibilities of packaging technology. The module looks at these aspects and the students will be able to define requirements concerning packaging and to assist in the choice of packaging.

#### **PARTIAL MODULE PACKAGING TECHNOLOGY**

This partial module looks at the interrelations of transportation and warehouse impact and the resulting packaging requirements. Central points are transport, transshipment and warehouse impact, corrosion protection, creation of loading units, loading protection and disposal.

#### **PARTIAL MODULE TRANSPORT TECHNOLOGY**

This partial module looks at the technical design of various carriers, such as trucks, ships, trains and planes. The technical aspects will be explained so that they can be taken into consideration for respective transport. Additionally, the respective interrelations between logistic requirements and the technical design will be developed. The focus is especially on the transportation chains stretched over the whole logistics chain. In addition to this, technical aspects of identification systems and shipment tracking are presented.

### **ECONOMICS IN LOGISTICS (Semester 4)**

**4 hours per week / 5 ECTS credits / language of instruction: German**

The goal of the course is to deepen the students' macroeconomic knowledge with the focus on external problems and transport policy, whereby the specific link with the specialisation logistics will be taken into consideration. In the course "International Economic Relations" students will acquire basic knowledge of the functionality of open economies, including political and societal trend changes. This will allow students to retain a certain overview and to come to company-relevant conclusions despite numerous events and the tremendous dynamism of the international field. In the course "Transport Policy" students will acquire knowledge about basic approaches of transport economy, the reasons for state interference in the transport process as well as the available instruments. This allows students to develop their own point of view regarding transport political problems and concrete action approaches on entrepreneurial and state level.

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The course "International Economic Relations" has a problem-oriented structure, focussing less on theoretical models and more on practice-oriented examples. Main topics include globalisation and foreign trade, international integration, international currency and finance relations. It looks at key political and societal change processes in the industrialised, emerging and developing countries (considering demographic and gender-specific aspects) as well as economic policy approaches in the context of European integration and globalisation.

The course "Transport Policy" also has a problem-oriented structure. Based on microeconomic knowledge the focus is on the clarification of the transport sector specifics as well as the challenges for the future of mobility. Main topics include a) introduction to the foundations of transport economy b) analysis of statistical data concerning transport development under consideration of sustainability aspects c) foundations of transport policy, regional and corporate mobility management and future perspectives.

### **LAW IN LOGISTICS (Semester 4)**

**4 hours per week / 5 ECTS credits / language of instruction: German**

The students learn to independently work and find appropriate solutions for simple cases and questions of corporate practice and to present the results in a discussion, using the acquired expert knowledge. Based on the knowledge of potential problem areas, the students should be able to anticipate and avoid conflicts. The course deals with the system and main contents of law in logistics in the areas procurement (contract design, terms and conditions, international trade clauses, international business), production (guarantees, product liability), sales (sales middleman) and transport (freight, forwarding and warehousing business) as well as the foundations of company law and loan securing law.

### **ENGLISH IN LOGISTICS (Semester 4)**

**2 hours per week / 3 ECTS credits / language of instruction: English**

The main aim is the ability to act adequately in an international context using a foreign language. The course will deal with the expansion and deepening of the methods of foreign language acquisition, the compendium of reading and writing strategies as well as oral communication skills. The focus is on the terminology and speech means of the special language of logistics. The topics can range from production and transportation logistics up to quality management. They are geared to respective current tendencies in logistics and varied according to the availability of current texts.

## **5. Semester**

### **PLACEMENT IN INDUSTRY – 30 ECTS credits**

The aim of the 6-month internship in companies or organisations at home or abroad is the introduction of the student to the practical work in business areas especially in logistics. This is achieved by a practical collaboration in which the business and technical knowledge and skills can be applied on problems in the practical world. Only by this the student will acquire the necessary deepened insights into coming assignments in economic, organisational, social and technical interrelations of organisations' operations. This also especially implies the reflexion of various operation- and decision processes regarding upcoming management tasks in logistics after the study program. Additionally the student will be enabled through this active collaboration to obtain suggestions for the further studies as well as an estimation regarding the development of his own qualification profile. Particularly this estimation of your own abilities and their development in a work determined by projects and/or daily business over a longer period in a department respectively business unit give clarity over professional interests and finally orientation for a goal-oriented career choice.

The internship takes place in the 5th semester and is university-managed, which means that next to preparation and post-processing there will be support during the internship. By this it is ensured that the students will obtain the biggest possible professional and personal benefit from the internship and that they can make the best possible use of their practical experience gained during their internship time when they re-enter the studies.

## **6. Semester**

### **TOTAL AND INTER-COMPANY LOGISTICS CONCEPTS (Semester 6)**

**4 hours per week / 6 ECTS credits / language of instruction: German**

Based on classical logistics concepts the students will be able to recognize and implement optimisation possibilities in logistics which demand an integrated view on logistics and/or cooperation with other corporate functions or other companies. The individual learning objectives are to understand logistics in an integrated way, to recognize logistical design possibilities in cooperation with other participants, to know essential strategies and concepts, which have an influence on logistics and to be able to participate in cross-functional team work. The contents of the course consists of the management of logistical objects, comprising of platform and module concepts, variant management, object-oriented location strategies, inventory management, postponement strategies, packaging management (creation of logistical units), identification of objects. Also Supply Chain Management consisting of the supply chain management model, universe of action for design

and optimisation of supply chains, success factors in supply chain management, methods for rationalisation and optimisation of supply chains, integrated design of technology, organisation and personnel as well as case studies.

### **CONTROLLING 2 (Semester 6)**

**2 hours per week / 3 ECTS credits / language of instruction: German**

The students will be introduced to selected methods of logistics controlling in order to acquire adequate professional competence and be able to apply modern logistics controlling methods. At the same time the correlation to business will be established. Based on the job description of a logistics controller selected current topics of logistics controlling will be discussed. This includes, for example, concepts of supply chain management, production cost, inventory and distribution controlling as well as modern cost management and steering methods such as e.g. target costing, process cost accounting and balanced scorecard.

### **TECHNOLOGY IN LOGISTICS (Semester 6)**

**4 hours per week / 6 ECTS credits / language of instruction: German**

Modern logistics is characterised by looking at the supply chain as a whole, starting from sourcing, over production up to distribution. On the one hand the foundations for a possible friction-free cooperation between technicians and managers should be established. On the other hand many logistical concepts have to be implemented by technical facilities. Warehouses play an important role in the supply chain. The warehouses have to be adapted to the respective logistics strategy. Often there are also interfaces between various companies. Therefore it is very important for the employees of the logistics areas that they are familiar with the warehouse processes as well as with the technical design of warehouses. An introduction to this topic is found in the module "Warehouse Technology". The basis of procurement and production are drawings, parts lists or recipes, which will be generated by technicians. On the basis of these documents the production costs and with it the price will be calculated. Also, the production methods are based on these technical foundations. New logistical concepts, such as just in time or just in sequence, require technical facilities. The technical foundations will be taught in this module. The module will enable future logisticians to design sourcing, production and storage processes in a way that technical aspects will be adequately taken into consideration.

#### **PARTIAL MODULE WAREHOUSE TECHNOLOGY**

Contents of the module are general issues concerning the warehouse in the overall logistics process, structuring criteria for product ranges, loading devices, warehouse facilities, industrial trucks, flow of material elements and commission strategies. The module includes field trips and presentations of existing warehouse systems.

#### **PARTIAL MODULE TECHNOLOGY IN PURCHASING AND PRODUCTION**

Contents of the module are the technical foundations for the creation of schedules of job operations and based on this the preliminary and final costing of the production costs. It also looks at construction from a cost point of view. The module also deals with the technical requirements of various production processes of assembling technology such as conveyor belt production, craft production or automated production methods. Based on this, newer production methods will be looked at. The module ends with consumer goods production. Based on this, the various steps for the conceptual design of such facilities will be developed in a business game.

### **MANAGEMENT IN LOGISTICS (Semester 6)**

**4 hours per week / 6 ECTS credits / language of instruction: German**

The course looks at corporate management, reorganisation and project management as well as generation and advancement of decision-making and responsibility (amongst others key competences) for managers. This includes, in particular, the advancement of capabilities for networked and integrated thinking regarding the methodological and analytical handling of complex business problems. The students will be prepared for issue and person-related leadership and management tasks in logistics. The course looks at corporate and human resource management approaches with detailed discussion of the resulting management issues, with the help of diverse current organisation, reorganisation and management tools and methods. Using various current communication models, communication methods for the manager will be worked out and discussed in the framework of their varied communication tasks. Various processes and approaches for the solution of certain business issues followed by the main problem areas relevant for success in operations side companies will be presented and discussed.

### **BUSINESS INFORMATICS 3 (Semester 6)**

**4 hours per week / 6 ECTS credits / language of instruction: German**

The course provides the students with theoretical and practical approaches for solving IT-oriented corporate issues. It also aims at practising their implementation with the help of the appropriate IT-tools within a project-orientated framework. The course is based on case studies. The project group will work on changing theoretical and/or practical business problems and preparing the results in the form of computer solutions or presentations.

### **QUANTITATIVE METHODS IN LOGISTICS (LECTURE & LAB) (Semester 6)**

**4 hours per week / 6 ECTS credits / language of instruction: German**

#### **2 hours LECTURE**

The concentration of operations research lies in the development of scientific models, with which results of alternative decisions can be forecasted and compared. The students should get to know the procedure, applications and limits of the complex quantitative methods. The data sets concentrate on economic problems to show the use of quantitative methods for business and management. Students analyse genuine data with the computer (software: EXCEL, MS-Project, SPSS). Main topics include decision analysis (structuring complex decision situations), data mining (classification and dependency analysis), multivariate analysis (correlation, regression, cluster analysis), linear programming, forecasting and networks.

#### **2 hours LAB**

In the lab students apply quantitative methods on real problems with real data. They learn and use common software like SPSS. The capability to analyse and interpret as well as the ability to work in a team will be trained by project work using real data. Main topics include the handling of huge amount of data, application of the statistics software SPSS, data transformation and data analysis, presentation of the results in a paper as well as a presentation.

### **ELECTIVE: MARKETING RESEARCH, MARKETING PLANNING, DISTRIBUTION POLICY**

**4 hours per week / 6 ECTS credits / language of instruction: German**

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### **ELECTIVE: PRODUCT DEVELOPMENT, PRODUCT MANAGEMENT AND PRICE MANAGEMENT**

**4 hours per week / 6 ECTS credits / language of instruction: German**

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### **ELECTIVE: COMMUNICATIONS POLICY AND SALES MANAGEMENT**

**4 hours per week / 6 ECTS credits / language of instruction: German**

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### **ELECTIVE: INTERCULTURAL COMMUNICATION AND COMPETENCE (Semester 6)**

**4 hours per week / 6 ECTS credits / language of instruction: English**

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### **ELECTIVE: THE LANGUAGE OF SHIPPING – PORTS AND PORT OPERATIONS (Semester 6)**

**4 hours per week / 6 ECTS credits / language of instruction: English**

The course teaches the students to act adequately in an international – e.g. also social and cross-cultural – context using a foreign language, learning independently. They learn to research harbour and transport logistical topics, present and explain in English and transfer information into English texts, English presentations and team work. The course will deal with the terminology of the language of shipping, particularly port, handling of cargo and transport. Based on the logistics modules in the 3rd, 4th and 6th semester topics are, for example, types of cargo vessel, cargo handling, port facilities and operations, international transport. They will be adapted to the respective current developments in logistics and varied according to the availability of current texts.

### **ELECTIVE: SELECTED TOPICS FROM LOGISTICS (Semester 6)**

**4 hours per week / 6 ECTS credits / language of instruction: English**

The aim of the course is the extension of the knowledge and skills acquired in the mandatory modules. The focus is particularly on independent research on logistics topics and permanent reports and discussions about the results. Topics are the terminology and speech means of the special language logistics English and the possibility to work specifically and extensively on one or more topics or on a current logistics tendency and their coverage in the literature and/or media.

## **7. Semester**

### **LOGISTICS IN THEORY AND PRACTICE (Semester 7)**

**4 hours per week / 6 ECTS credits / language of instruction: German**

The students look at contemporary questions of logistics in theory and practice. The individual learning objectives are to work out issues from logistics and supply chain management independently and scientifically, to apply this knowledge in decision situations in supply chain management in a supply chain business game. They learn team work, the ability to work under pressure, responsibility and are prepared for the world of work. The course will deal with current topics of logistics and supply chain management as well as the business game "Supply Chain Management".