

# **Module Handbook**

## **Real Estate Management**

### **(Immobilienmanagement)**

Faculty of Architecture and Civil Engineering  
Hochschule **RheinMain** | University of Applied Sciences

### **Bachelor of Engineering (B.Eng.)**

#### **IMPORTANT**

Please note that this is an English translation of the German module handbook intended to give an overview of the degree program's curriculum and teaching contents. This document is for information purposes only and is not legally binding.

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<b>Module Title</b>	<b>Introduction to Real Estate Management</b>
Module Title (German)	Grundlagen des Immobilienmanagements
Code	1100
Language of In- struction	German
Recommended Semester(s)	1
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>• Strengthening students' ability to study and to work scientifically</li> <li>• Establishing a basis for overall comprehension of buildings and their technical concepts</li> <li>• Getting to know different areas of activity of the real estate industry</li> <li>• Acquiring basic competencies for studying and for working in the real estate management industry</li> <li>• Learning about the technical disciplines of construction, operation, law, economics and related operational groups in detail</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Introduction to Real Estate Management</b>
Course Title (German)	Grundlagen des Immobilienmanagements
Language of Instruction	German
Recommended Semester(s)	1
Course offered in	Every year
Topics/Course Contents	<p>Selected content items from the areas of construction, operation, economic basics and their integration in respective fields of law, including:</p> <ul style="list-style-type: none"> <li>• Organization of construction companies</li> <li>• Ways of executing construction projects</li> <li>• Project development</li> <li>• Real estate developers</li> <li>• Housing industry</li> <li>• Building lifecycle and management</li> <li>• Facility management</li> <li>• Technical asset management</li> <li>• Areas of activity of planners</li> <li>• Occupational groups in the real estate lifecycle</li> <li>• Housing industry in the Rhine Main Area</li> <li>• Commercial real estate in the Rhine Main Area</li> <li>• Importance of the European real estate market</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Introduction to Facility Management</b>
Module Title (German)	Grundlagen des Facilitymanagements
Code	1200
Language of Instruction	German
Recommended Semester(s)	1
Module offered in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Acquiring specialized knowledge of technical, infrastructural and commercial areas of responsibility of facility management</li> <li>• Acquiring knowledge of the key aspects of the different disciplines and the organization of facility management</li> <li>• Based on acquired knowledge: knowing the most important technical application processes and putting them into reasonable context regarding the building lifecycle</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Introduction to Facility Management</b>
Course Title (German)	Grundlagen des Facilitymanagements
Language of Instruction	German
Recommended Semester(s)	1
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Fields of application of facility management services</li> <li>• Detailed presentation of technical building services and their relevance for facility management services</li> <li>• Technical application processes of facility management, e.g. cleaning, water supply, sewage disposal, heat and cold supply, power supply, operation, servicing, inspection, upkeep of traffic and green areas, recycling facilities, maintenance (prioritization, damage categorization, ...) and service functions (e.g. catering)</li> <li>• Operative possibilities of influencing technical facility management</li> <li>• Main features of service management, relocation management, CAFM services and systems</li> <li>• Lifecycle of buildings and its installations</li> </ul>
Credit Points	5 CP



<b>Module Title</b>	<b>Introduction to Structural Engineering</b>
Module Title (German)	Bautechnische Grundlagen
Code	1300
Language of Instruction	German
Recom- mended Se- mester(s)	1
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Acquiring specialized technical knowledge of construction planning processes resulting, among others, from legal bases and their integration in norms</li> <li>• Applying and evaluating construction planning processes independently</li> <li>• Identifying and evaluating principal construction methods and structures, building types and architectural styles as well as fundamental planning guidelines in the area of building technology</li> <li>• Acquiring basic comprehension of the support structure of buildings</li> <li>• Developing the ability to identify simple static systems and to evaluate essential aspects of loads, possible live loads and additional loads relevant for conversion measures</li> <li>• Acquiring professional expertise for evaluating building constructions</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Introduction to Structural Engineering</b>
Course Title (German)	Bautechnische Grundlagen
Language of Instruction	German
Recommended Semester(s)	1
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Overview of regulations relevant for planning and erecting buildings (legal bases and norms)</li> <li>• Building typology</li> <li>• Surveying basics</li> <li>• Construction methods in the areas of earthworks and foundation engineering</li> <li>• Types of support structure</li> <li>• Static correlations based on simple sample calculations and practical design techniques</li> <li>• Design differences from a static point of view</li> <li>• Structures of building technologies applied in above-ground construction (reinforced concrete, steel and wood)</li> <li>• Finishing/extension works in above-ground construction</li> <li>• Organization of construction sites</li> <li>• Turn-key construction</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Urban Project Planning and Area Development</b>
Module Title (German)	Städtebauliche Projektplanung und Gebietserschließung
Code	1400
Language of In- struction	German
Recommended Semester(s)	1
Module offered in	Every year
Competencies	<ul style="list-style-type: none"><li>• Developing the competence to work on and assess the quality of a project as regards urban development and architecture</li><li>• Assessing and changing technical project requirements and their integration in the planning process independently, e.g. based on necessary utility installations</li></ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Urban Project Planning and Area Development</b>
Course Title (German)	Städtebauliche Projektplanung und Gebietserschließung
Language of Instruction	German
Recommended Semester(s)	1
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Type and extent of building use (<i>BauGB</i>– German Building Code, <i>BauNVO</i>– German Land Use Ordinance)</li> <li>• Land use</li> <li>• Traffic volume</li> <li>• Traffic development concept (from district level to project area)</li> <li>• Integration in traffic infrastructure</li> <li>• Basics of area and land development</li> <li>• Spatial planning process</li> <li>• Procedures in planning and building law</li> <li>• Involving town planning, urban design, historic monuments protection and other public bodies</li> <li>• Area development requirements regarding media and traffic</li> <li>• Requirements for technical infrastructure, building construction and open space design</li> </ul> <p>In order to deepen their knowledge in the field, students work on an urban planning task independently.</p>
Credit Points	5 CP

<b>Module Title</b>	<b><i>BGB (German Civil Code) and Building Contract Law</i></b>
Module Title (German)	BGB und Bauvertragsrecht
Code	1500
Language of Instruction	German
Recom- mended Se- mester(s)	1
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Knowing the basics, structures and fundamental principles of German civil law</li> <li>• Practicing the legal bases of civil building law and of the <i>VOB Teil B</i> (German Contracting Rules for Award of Public Works Contracts, Part B) as well as the interaction of these rules with the BGB (German Civil Code)</li> <li>• Developing the ability to deal with the most important rules stated in the <i>BGB</i> (German Civil Code) and the <i>VOB/B</i> (German Contracting Rules for Award of Public Works Contracts, Part B) in the area of real estate management independently</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b><i>BGB (German Civil Code) and Building Contract Law</i></b>
Course Title (German)	BGB und Bauvertragsrecht
Language of In- struction	German
Recommended Semester(s)	1
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Sources of law</li> <li>• Types of norms and their hierarchy</li> <li>• Fields of law</li> <li>• Legislative and administrative powers of the German federal government and the German Länder (federal states)</li> <li>• Law enforcement in practice – courts</li> <li>• Works contract law according to the <i>BGB</i> (German Civil Code) and the <i>VOB/B</i> (German Contracting Rules for Award of Public Works Contracts, Part B)</li> <li>• Classification and principal content items of the <i>Allgemeiner Teil BGB</i> (General Part of the German Civil Code) and the <i>Schuldrecht BGB</i> (Law of Obligations of the German Civil Code): <ul style="list-style-type: none"> <li>○ Legal entities</li> <li>○ Legal transactions</li> <li>○ Conclusion of contracts</li> <li>○ Law of obligations, in particular accrual and content of obligations</li> <li>○ Most important contract types stated in the <i>BGB</i> (German Civil Code) taking the particularities of the <i>HGB</i> (German Commercial Code) into account</li> <li>○ Introduction to AGB law (general terms and conditions)</li> </ul> </li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Introduction to Macroeconomics and Business Economics</b>
Module Title (German)	Grundlagen der VWL und BWL
Code	1600
Language of In- struction	German
Recommended Semester(s)	1
Module offered in	Every year
Competencies	<ul style="list-style-type: none"><li>• Understanding the aims and basic concepts of macroeconomics and business economics</li><li>• Understanding the instruments and functions of economic concepts on a business economics level and on a macroeconomics level as well as classifying their relevance</li><li>• Discerning the relevance of macroeconomics and business economics for the real estate industry based on specialized examples taken from the real estate industry</li></ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Introduction to Macroeconomics and Business Economics</b>
Course Title (German)	Grundlagen der VWL und BWL
Language of In- struction	German
Recommended Semester(s)	1
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Macroeconomic basics and distinction vis-à-vis other scientific disciplines</li> <li>• Market mechanisms and mechanisms of economic actors <ul style="list-style-type: none"> <li>○ Modeling supply and demand mechanisms and pricing, including monopolies, oligopolies and polypolies</li> <li>○ Economic cycle and real estate market</li> <li>○ Statistics and economic forecasts focusing on the real estate industry</li> </ul> </li> <li>• Business economic basics and distinction vis-à-vis other scientific disciplines <ul style="list-style-type: none"> <li>○ Economic principle and efficiency concept</li> <li>○ Companies as part of business economics</li> <li>○ Developing company targets and controlling them using business instruments</li> <li>○ Company structures and related legal and organizational forms, including branch offices and agencies</li> <li>○ Basics of cost and management accounting and of balancing</li> <li>○ Importance of business economics and macroeconomics for successful long-term development of companies in their respective markets using the example of the real estate industry</li> </ul> </li> </ul>
Credit Points	5 CP



<b>Module Title</b>	<b>Mathematics for Engineers</b>
Module Title (German)	Mathematik für Ingenieurinnen und Ingenieure
Code	2100
Language of In- struction	German
Recommended Semester(s)	2
Module offered in	Every year
Competencies	<ul style="list-style-type: none"><li>• Acquiring basic and application-oriented mathematical knowledge, in particular knowledge needed for finding solutions to technical problems</li></ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Mathematics for Engineers</b>
Course Title (German)	Mathematik für Ingenieurinnen und Ingenieure
Language of Instruction	German
Recommended Semester(s)	2
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Theory of functions (in particular functions relevant in professional practice)</li> <li>• Differential and integral calculus (in particular practice-oriented issues and solutions related to real estate management)</li> <li>• Linear algebra (in particular practice-oriented issues and solutions related to technical real estate management)</li> <li>• Vector algebra including scalar product and vector product</li> <li>• Power functions and root functions</li> <li>• Trigonometric functions and curve functions</li> <li>• Exponential functions and logarithm functions</li> </ul> <p>Knowledge of the areas mentioned above is consolidated using technical examples taken from construction and operation.</p>
Credit Points	5 CP

<b>Module Title</b>	<b>Technical English 1</b>
Module Title (German)	Technisches Englisch 1
Code	2200
Language of Instruction	English
Recommended Semester(s)	2
Module offered in	Every year
Competencies	<ul style="list-style-type: none"><li>• Knowing constructional terms</li><li>• Ability to express oneself, especially on technical topics, in English – orally and in writing</li><li>• Developing the language competence and comprehension needed for communicating in business situations</li></ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Technical English 1</b>
Course Title (German)	Technisches Englisch 1
Language of Instruction	English
Recommended Semester(s)	2
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Technical listening comprehension related to construction and operation of real estate, negotiations and technical conversations in English</li> <li>• Textual and vocabulary work</li> <li>• Text analysis and writing practice on constructional and operational topics</li> <li>• Developing speaking skills</li> <li>• Conducting technical conversations in English</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Business Economics in the Real Estate Industry</b>
Module Title (German)	Betriebswirtschaftslehre in der Immobilienwirtschaft
Code	2300
Language of Instruction	German
Recom- mended Se- mester(s)	2
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Deepening knowledge of business economics acquired in the module "Introduction to Macroeconomics and Business Economics"</li> <li>• Outlining the entire field of business economics, in particular the correlations in the real estate industry with its pricing taking aspects of economic efficiency into account when planning, erecting and operating buildings</li> <li>• Understanding and evaluating business correlations in the emergence of value chains</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Business Economics in the Real Estate Industry</b>
Course Title (German)	Betriebswirtschaftslehre in der Immobilienwirtschaft
Language of Instruction	German
Recommended Semester(s)	2
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Basics of business economics, including the partial aspects of managing business procedures and their efficiency appraisal</li> <li>• Basics of financial accounting and related cost accounting</li> <li>• Resource and inventory management including corporate management</li> <li>• Management accounting and financial accounting as parts of external and internal accounting</li> <li>• Legal bases for organizing financial accounting taking aspects of real estate management into account</li> <li>• Classification and techniques of double-entry accounting</li> <li>• Presentation of business processes related to the practice of companies in the real estate industry</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Planning Law and Tenancy Law</b>
Module Title (German)	Planungsrecht und Mietrecht
Code	2400
Language of Instruction	German
Recom- mended Se- mester(s)	2
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Developing the ability to understand legal situations when developing projects, including public building law and issues of neighborhood law</li> <li>• Acquiring knowledge of tenancy law relevant for residential and commercial construction as well as of the legal bases of construction planning law (<i>BauGB</i> – German Building Code) and building regulations law</li> <li>• Understanding the legal classification of tenancy law in the <i>BGB</i> (German Civil Code) and assessing tenancy contract design</li> <li>• Determining admissibility of construction projects according to planning law</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Planning Law and Tenancy Law</b>
Course Title (German)	Planungsrecht und Mietrecht
Language of Instruction	German
Recommended Semester(s)	2
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Tenancy law in the <i>BGB</i> (German Civil Code)</li> <li>• Current jurisdiction and development of tenancy law based on current cases</li> <li>• Differentiating between residential and commercial tenancies</li> <li>• Tenancy contract design</li> <li>• Construction planning law (<i>BauGB</i> – German Building Code)</li> <li>• Development plans / land-use plans</li> <li>• Building law of the Länder (German federal states) (<i>HBO</i> – Hessian Building Law)</li> <li>• Structure of approving authorities</li> </ul>
Credit Points	5 CP



<b>Module Title</b>	<b>Project Management for Engineers</b>
Module Title (German)	Projektmanagement für Ingenieurinnen und Ingenieure
Code	2500
Language of Instruction	German
Recommended Semester(s)	2
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>• Heading projects in the function of a technical manager in the planning phase, erection phase or operation phase</li> <li>• Cooperating with other project participants on an interdisciplinary level in the function of a technical representative</li> <li>• Developing the competence to understand and fulfill the <i>AHO</i> project stage tasks resulting from the fields of activity of project management independently (<i>AHO</i>- Committee of the Associations and Chambers of Engineers and Architects for Fee Regulations)</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Project Management for Engineers</b>
Course Title (German)	Projektmanagement für Ingenieurinnen und Ingenieure
Language of In- struction	German
Recommended Semester(s)	2
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Requirements and tasks of project participants, such as planners, public authorities, building companies, project management, investors and banks</li> <li>• Presentation and detailed explanation of <i>AHO</i> project stages (<i>AHO</i>-Committee of the Associations and Chambers of Engineers and Architects for Fee Regulations)</li> <li>• Project management tools for controlling quality, deadlines and costs – application in practice</li> <li>• Basis of the <i>AHO</i> (Committee of the Associations and Chambers of Engineers and Architects for Fee Regulations)</li> <li>• More detailed presentation of scheduling tools in construction management (precedence diagram, Gantt diagram, Gantt network diagram) and of their methodological foundations and applications using project examples</li> <li>• Basics of technical quantity surveying</li> <li>• Assessing execution risks during project realization caused by technical issues</li> <li>• Forming project teams and introducing team building measures <ul style="list-style-type: none"> <li>○ Applying construction management, involving building executors in the process</li> <li>○ All project stages according to the <i>AHO</i> (Committee of the Associations and Chambers of Engineers and Architects for Fee Regulations)</li> <li>○ Basics and methods of scheduling</li> <li>○ Structure of operation lists and technical links</li> <li>○ Calculating timeframes for planning and building execution</li> <li>○ Structure of precedence and Gantt diagrams from a technical point of view</li> </ul> </li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Structural Design and Structural Physics</b>
Module Title (German)	Baukonstruktion und Bauphysik
Code	2600
Language of Instruction	German
Recom- mended Se- mester(s)	2
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Knowing the principal features of structural designs consisting of the materials reinforced concrete, masonry and wood/timber</li> <li>• Knowing principle planning basics of construction design</li> <li>• Developing the ability to screen planning documents for structural design features</li> <li>• Acquiring more detailed knowledge of structural physics in the fields of protection against moisture, noise and thermal insulation as well as fire control – related calculations and implementation in practice</li> <li>• Applying learnt calculation methods for solving structural physics problems, in particular determining and assessing the technical characteristics of a component and entire constructions in terms of noise, heat and moisture</li> <li>• Developing the ability to examine and assess buildings from a technical point of view with particular regard to structural physics requirements</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Structural Design and Structural Physics</b>
Course Title (German)	Baukonstruktion und Bauphysik
Language of In- struction	German
Recommended Semester(s)	2
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Principle characteristics of different materials within the frame- work of building materials science</li> <li>• Topics from structural physics: moisture, noise, heat, light and fire control as a basis for components/details planned correctly based on structural physics</li> <li>• Construction principles in the fields of shell and interior construc- tion and their production processes</li> <li>• Correlations between the construction and other structural com- plexes, e.g. material behavior, processing, shape of the compo- nent or of the building</li> <li>• Further structural engineering basics when planning buildings <ul style="list-style-type: none"> <li>○ Footing and excavation</li> <li>○ Load-bearing structure</li> <li>○ Roofs and sealings</li> <li>○ Windows and facades</li> </ul> </li> <li>• Interfaces in the area of building extension</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Real Estate Investment and Financing</b>
Module Title (German)	Immobilieninvestition und -finanzierung
Code	3100
Language of Instruction	German
Recom- mended Se- mester(s)	3
Module offe- red in	Every year
Compen- encies	<ul style="list-style-type: none"> <li>• Knowing the issues of evaluating investments in projects</li> <li>• Making fiscal decisions corresponding to the processes in a real estate company taking investment appraisals into account</li> <li>• Knowing and understanding the correlations between fiscal company policy in the context of real estate investments, financial markets and financing banks</li> <li>• Deepening knowledge of particularities of real estate investments based on market mechanisms in the area of investment appraisals, e.g. capital procurement, administration and usage in the planning, execution and operation phase of real estate</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Real Estate Investment and Financing</b>
Course Title (German)	Immobilieninvestition und -finanzierung
Language of Instruction	German
Recommended Semester(s)	3
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Modeling investment decisions</li> <li>• Static methods of investment appraisal</li> <li>• Dynamic methods of investment appraisal</li> <li>• Basics of company funding</li> <li>• Funding types, special forms of financing and their legal bases, e.g. mortgage loans, consortium financing, project financing</li> <li>• Financial analysis and financial planning, including financial leverage effect</li> <li>• Liquidity risk, profitability risk and financial risk within the framework of investment valuation</li> <li>• Risk management and risk analysis of investments and of financial structuring</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Tax Law and Funding</b>
Module Title (German)	Steuerrecht und Finanzierungsfragen
Code	3200
Language of Instruction	German
Recom- mended Se- mester(s)	3
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Acquiring more detailed knowledge of internal and external accounting, of real estate related taxes as well as of the structure of real estate funding, applied to issues relevant in the real estate industry</li> <li>• Developing the ability to get an overview of the financial situation of a real estate project and a real estate company based on accounting information and to assess the information with regard to risks</li> <li>• Knowing basic real estate taxes and taxation forms</li> <li>• Mastering the preparation of annual accounts with regards to commercial and tax law in a national and international context</li> <li>• Building on the acquired basic knowledge of financing, developing the ability to find scope for action for optimized real estate funding models and to discuss them using practice-oriented issues</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Tax Law and Funding</b>
Course Title (German)	Steuerrecht und Finanzierungsfragen
Language of Instruction	German
Recommended Semester(s)	3
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Structure of internal and external accounting</li> <li>• Basic terms of balancing and annual accounts of real estate companies (including <i>HGB</i> – German Commercial Code vs. IAS)</li> <li>• KPI-oriented usage of information provided by internal and external accounting for the real estate industry</li> <li>• Interpreting real estate company accounting, in particular analyzing the asset, financial and profit situation as well as the funding structure</li> <li>• Taxation forms in the utilization cycle of real estate, such as acquisition, maintenance and vending</li> <li>• Taxation of different taxable persons/entities, e.g. natural persons, corporations, investment companies</li> <li>• Funding structures for different purposes, among others project financing, real estate developer financing and structured commercial real estate funding</li> <li>• Practice-oriented example cases</li> </ul>
Credit Points	5 CP



<b>Module Title</b>	<b>Operator Responsibility, Acquisition and Contracts FM</b>
Module Title (German)	Betreiberverantwortung, Kauf und Verträge FM
Code	3300
Language of Instruction	German
Recom- mended Se- mester(s)	3
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Understanding and evaluating technical risks for owners and operators</li> <li>• Comprehending the responsibilities an operator takes on when being the operator and owner of real estate, assessing inherent/related risks and dealing with these risks during real estate business operations</li> <li>• Taking the owner's point of view when understanding the necessity to engage operators, in particular in the area of technical facility management</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Operator Responsibility, Acquisition and Contracts FM</b>
Course Title (German)	Betreiberverantwortung, Kauf und Verträge FM
Language of Instruction	German
Recommended Semester(s)	3
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Responsibilities, how and in how far owners in the real estate industry can delegate these responsibilities to operators</li> <li>• The concept of operator responsibility</li> <li>• Assessing arising risks for owners and operators</li> <li>• Legal framework conditions for operators and resulting responsibilities via-à-vis the owner and third parties</li> <li>• Delimiting liability and resulting discharge for the owner using necessary protection systems such as contracts and related documentation</li> <li>• Basics of operating building service facilities, related maintenance obligations</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Project Development and Technical Planning</b>
Module Title (German)	Projektentwicklung und technische Planung
Code	3400
Language of Instruction	German
Recommended Semester(s)	3
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>• Comprehending the requirements of technical project development and related planning, in particular applying laws and related guidelines for development plans as well as the building regulations law of the respective Land (German federal state)</li> <li>• Building upon the module "Urban Project Planning and Area Development" (1400), acquiring more detailed knowledge of the decision for and implementation of a project idea up to the start of the planning phase and developing the ability to apply this knowledge in later projects</li> <li>• Developing the technical competence to present technical arguments in an interdisciplinary team using the learnt solution method and to bring about decisions in a project team in a target-oriented way</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Project Development and Technical Planning</b>
Course Title (German)	Projektentwicklung und technische Planung
Language of Instruction	German
Recommended Semester(s)	3
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Technical processes in project development, from the first project idea to the start of sketch planning</li> <li>• Technical basics for granting building permits, dealing with building permits during project execution</li> <li>• Process and requirements of project development: <ul style="list-style-type: none"> <li>○ Organization and business structure of the project developer, distribution of technical and commercial responsibilities</li> <li>○ Market analyses and assessment of different locations by developing assessment criteria</li> <li>○ Development calculation for a first estimate of needed investment and of expected amounts from a technical point of view</li> <li>○ Evaluating the planning situation under public law</li> <li>○ Issues of public and private law</li> </ul> </li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Technical Facility Management</b>
Module Title (German)	Technisches Gebäudemanagement
Code	3500
Language of In- struction	German
Recommended Semester(s)	3
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>• Acquiring knowledge of the operation of building services, including guidelines and official standards for operating and maintaining technical building facilities</li> <li>• Developing the ability to operate a building in the position of the person in charge of building technology and to optimize existing building technology</li> <li>• Assessing and solving complex problems arising at the interfaces of technical building services</li> <li>• Developing the competence to operate a building sustainably and environmentally sound</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Technical Facility Management</b>
Course Title (German)	Technisches Gebäudemanagement
Language of Instruction	German
Recommended Semester(s)	3
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Technical building services on the basis of the execution-/trade-oriented breakdown of costs defined by DIN standard 276 and <i>VOB/C</i> (German Contracting Rules for Award of Public Works Contracts, Part C)</li> <li>• Individual trades <ul style="list-style-type: none"> <li>○ Building ventilation systems</li> <li>○ Heating systems and central water heating systems, gas, water and drainage systems within buildings</li> <li>○ Low- and medium-voltage systems up to 36 kV</li> <li>○ Conveyor systems, elevator systems, escalators and moving walkways</li> <li>○ Building automation</li> <li>○ Lightning protection systems</li> <li>○ Radio installations</li> <li>○ Telecommunications</li> </ul> </li> <li>• Special areas of building technology, e.g.: <ul style="list-style-type: none"> <li>○ Technical fire control</li> <li>○ Regenerative power engineering in building services</li> <li>○ Seasonal storage technology in building services</li> <li>○ Power supply and operation of computation centers</li> </ul> </li> <li>• Total energetic balance of a building</li> <li>• Tasks during initial and further operation of a building with regards to building services</li> <li>• Comfort within a building, e.g. noise produced by the ventilation system or insufficient fresh air supply in rooms</li> <li>• Building planning as an entire process</li> <li>• Integrating the installation and initial operation of building services in the entire building process</li> <li>• Energy-efficient planning</li> <li>• Sustainable and environmentally-friendly operation</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Maintenance Management and Tenant Improvements</b>
Module Title (German)	Instandhaltungsmanagement und Mieterausbau
Code	3600
Language of Instruction	German
Recom- mended Se- mester(s)	3
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Knowing and understanding the technical maintenance processes of real estate and technical facilities</li> <li>• Acquiring more detailed knowledge in the area of economic evaluation of maintenance measures</li> <li>• Acquiring detailed knowledge in the areas of operational lifetime, apportionment and value of technical installations in real estate</li> <li>• Conducting maintenance measures in a target-oriented way</li> <li>• Knowing the complex correlations between relocation measures and conversion strategies on the one hand and the value and profit of real estate within the framework of tenant improvements on the other hand</li> <li>• Understanding the incorporation of green building aspects in the decision-making process</li> <li>• Developing the ability to control and manage tenant improvement construction processes on a technical level in a team consisting of tenants, planners and building contractors</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Maintenance Management and Tenant Improvements</b>
Course Title (German)	Instandhaltungsmanagement und Mieterausbau
Language of Instruction	German
Recommended Semester(s)	3
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Required measures during the operational lifetime of real estate</li> <li>• Recurring inspections according to applicable norms and regulations on structural installations and building service installations</li> <li>• Systematization of maintenance measures by establishing systems and using EDP-aided maintenance management programs</li> <li>• Resource-efficient planning and business organization</li> <li>• Waste prevention concepts during construction and operation</li> <li>• Importance of tenant improvements both when initiating tenancies and when retaining tenants with the aim of long-term usage of real estate <ul style="list-style-type: none"> <li>○ Tenant improvement planning processes</li> <li>○ Limiting conditions according to planning law from the lessor's point of view when changing the usage of rental areas</li> <li>○ Dealing with building permits and involved public authorities</li> <li>○ Requirements for tenants developing areas within the framework of corporate design measures</li> <li>○ Tenant support during the planning and construction phase</li> <li>○ Integration of tenant works in the entire tenant improvement process</li> <li>○ Managing tenants moving into real estate while it is in use</li> <li>○ Managing tenants moving out of real estate and returning rental areas to the owner</li> </ul> </li> </ul>
Credit Points	5 CP



<b>Module Title</b>	<b>Introduction to Real Estate Valuation</b>
Module Title (German)	Grundlagen der Immobilienbewertung
Code	4100
Language of Instruction	German
Recom- mended Se- mester(s)	4
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Real estate valuation is an essential part of economic efficiency and investment decisions. <ul style="list-style-type: none"> <li>○ Acquiring the technical knowledge necessary for participating in real estate valuation processes independently</li> <li>○ Applying the asset value approach, the income approach, the sales comparison approach and the residual value approach</li> <li>○ Analyzing and assessing the technical substance of a building with regards to its current value and upcoming technical changes in order to increase its value</li> <li>○ Developing the ability to examine and supervise value appraisals critically based on the German and European valuation systems</li> <li>○ Developing the competence to deal with international investors using their most common real estate valuation systems</li> </ul> </li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Introduction to Real Estate Valuation</b>
Course Title (German)	Grundlagen der Immobilienbewertung
Language of Instruction	German
Recommended Semester(s)	4
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Real estate performance systems in Germany</li> <li>• Inclusion of property insurances and real estate valuation</li> <li>• Real estate valuation approach of contractees such as banks and insurance companies</li> <li>• Appraiser methods for making valuations: <ul style="list-style-type: none"> <li>○ Asset value approach</li> <li>○ Income approach</li> <li>○ Sales comparison approach</li> <li>○ Residual value approach</li> </ul> </li> <li>• Methods for assessing damages and defects of technical installations in buildings</li> <li>• Calculating expected construction costs for the removal of defects in terms of technical due diligence</li> <li>• Deepening acquired knowledge by valuing real estate within the framework of an independent practice task</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Real Estate Marketing</b>
Module Title (German)	Immobilienmarketing
Code	4200
Language of Instruction	German
Recom- mended Se- mester(s)	4
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Understanding the importance of marketing measures for increasing and maintaining the value of real estate and for selling real estate</li> <li>• Acquiring knowledge of marketing mechanisms and involving real estate agents as well as other marketing instruments, including modern online channels, when commercializing real estate</li> <li>• Choosing adequate marketing instruments for different types of real estate, in particular residential properties, commercial properties and special-purpose properties</li> <li>• Knowing and mastering marketing mechanisms for project development and for ongoing tenant management in addition to classic marketing instruments for selling real estate</li> <li>• Presenting and defending a marketing idea in a team</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Real Estate Marketing</b>
Course Title (German)	Immobilienmarketing
Language of Instruction	German
Recommended Semester(s)	4
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Basic marketing terms for commercializing real estate</li> <li>• Examples of marketing procedures <ul style="list-style-type: none"> <li>○ Price</li> <li>○ Product</li> <li>○ Promotion</li> <li>○ Placement</li> </ul> </li> <li>• Decision criteria for marketing measures</li> <li>• In teams: developing and examining a marketing concept using a practice example and presenting the requirements of real estate commercialization</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Legal Aspects of Purchasing and Vending Real Estate</b>
Module Title (German)	Rechtliche Ausgestaltung des An- und Verkaufs von Immobilien
Code	4300
Language of Instruction	German
Recom- mended Se- mester(s)	4
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Understanding the legal aspects and particularities when purchasing and vending real estate, including more detailed knowledge of the <i>BGB</i> (German Civil Code) and of resulting contract law in Germany</li> <li>• Applying the <i>BGB</i> (German Civil Code) with regards to purchasing and vending real estate</li> <li>• Knowing and understanding the issues relevant for purchasing or vending real estate and associated land ownership in Germany as well as related limiting conditions</li> <li>• Acquiring legal knowledge most important for the practical work of real estate managers with regards to purchasing and vending real estate</li> <li>• Analyzing purchase contracts methodologically</li> <li>• Developing the competence to examine real estate purchase contracts and to design these contracts in cooperation with lawyers and notaries</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Legal Aspects of Purchasing and Vending Real Estate</b>
Course Title (German)	Rechtliche Ausgestaltung des An- und Verkaufs von Immobilien
Language of Instruction	German
Recommended Semester(s)	4
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Initiating contract negotiations (letter of intent, precontract, exclusivity, etc.)</li> <li>• Legal particularities with regards to object of a contract, contracting parties and contract conclusion</li> <li>• Obligations of contracting parties in case of real estate purchase contracts</li> <li>• The object of a contract being free of material and legal defects</li> <li>• Technical due diligence</li> <li>• Deepening acquired knowledge of different aspects of contract design when purchasing or vending real estate using specific examples</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Public Law</b>
Module Title (German)	Öffentliches Recht
Code	4500
Language of Instruction	German
Recommended Semester(s)	4
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>• Understanding the importance of public law when realizing real estate projects</li> <li>• Understanding the application of limiting legal conditions from the field of public law within the framework of developing, constructing and operating real estate</li> <li>• Developing the competence to carry out and examine tendering procedures according to both <i>VOL/A</i> (German Procurement and Contract Procedures for Supplies and Services/Part A) and <i>VOB/A</i> (German Contracting Rules for Award of Public Works Contracts, Part A)</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Public Law</b>
Course Title (German)	Öffentliches Recht
Language of In- struction	German
Recommended Semester(s)	4
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Content of <i>VOB/A</i> (German Contracting Rules for Award of Public Works Contracts, Part A), in particular the prescribed tendering procedure</li> <li>• Chronology of tendering procedures according to <i>VOB/A</i> (German Contracting Rules for Award of Public Works Contracts, Part A)</li> <li>• Tendering procedure according to <i>VOL/A</i> (German Procurement and Contract Procedures for Supplies and Services/Part A) and the course of the procedure for purchasing, for example, services</li> <li>• Limiting conditions from the field of public law when awarding contracts</li> <li>• Illustration of processes under administrative law when awarding contracts</li> <li>• Subsidy law and funding law</li> <li>• Law on municipal fees and charges</li> </ul>
Credit Points	5 CP



<b>Module Title</b>	<b>Applied Construction Project Management</b>
Module Title (German)	Angewandtes Bauprojektmanagement
Code	4600
Language of Instruction	German
Recom- mended Se- mester(s)	4
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Refining the ability to analyze and assess problems in the field of construction project management based on realistic and complex problem cases</li> <li>• Applying the control tools for technical requirements common in the field independently and making and evaluating decisions in a target-oriented way</li> <li>• Developing the competence to manage projects in the position of the responsible technical manager independently and to arrange interdisciplinary cooperation of project teams</li> <li>• Training selected technical, methodological, social and personal competencies, such as <ul style="list-style-type: none"> <li>○ Ability to analyze and to take criticism</li> <li>○ Researching and selecting suitable learning resources</li> <li>○ Effective team work for solving problems</li> <li>○ Improving communication skills (verbal, written, visual)</li> <li>○ Usage of technical knowledge and personal intellectual capabilities</li> </ul> </li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Applied Construction Project Management</b>
Course Title (German)	Angewandtes Bauprojektmanagement
Language of Instruction	German
Recommended Semester(s)	4
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Project initiation</li> <li>• Performance and remuneration models in project management</li> <li>• Cost planning</li> <li>• Change and decision management</li> <li>• Tender and award of planning and construction services/works</li> <li>• Contract and claim management</li> <li>• Conflict management / negotiation techniques</li> <li>• Risk management</li> <li>• Reporting system</li> <li>• Going into detail on learning content by examining case examples in project groups</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Spatial and Technical Expansion</b>
Module Title (German)	Raumbildender Ausbau und technischer Ausbau
Code	4700
Language of Instruction	German
Recommended Semester(s)	4
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>Evaluating and using the different building materials and technical possibilities of spatial and technical expansions, including – in particular – the assessment of the different systems with regards to their value and their influence on the construction and letting of commercial property</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Spatial and Technical Expansion</b>
Course Title (German)	Raumbildender Ausbau und technischer Ausbau
Language of Instruction	German
Recommended Semester(s)	4
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Spatial expansion</li> <li>• Requirements for the spatial expansion of buildings, in particular: <ul style="list-style-type: none"> <li>○ Drywall constructions of walls and ceilings</li> <li>○ Wooden and metal cladding systems</li> <li>○ System and modular wall systems</li> <li>○ Ceiling systems with requirements for building service installations and fire protection systems</li> <li>○ Floor systems</li> <li>○ Dry and wet systems</li> </ul> </li> <li>• Technical expansion <ul style="list-style-type: none"> <li>○ Aeration systems</li> <li>○ Heating and cooling systems</li> <li>○ Lighting</li> <li>○ Connecting a building to communication networks, wired and wireless</li> <li>○ More detailed explanation of building automation and its influence on the usage and the comfort of a building</li> </ul> </li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Personnel Placement and Management</b>
Module Title (German)	Personaleinsatz und Personalführung
Code	5100
Language of Instruction	German
Recommended Semester(s)	5
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>• Planning personnel placement taking especially economic considerations into account</li> <li>• Managing and deploying personnel according to required qualifications</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Personnel Placement and Management</b>
Course Title (German)	Personaleinsatz und Personalführung
Language of Instruction	German
Recommended Semester(s)	5
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Motivational and management techniques</li> <li>• Moderation methods</li> <li>• Chairing different kinds of meetings, such as property owner meetings, site consultation meetings, etc.</li> <li>• Team management and leadership skills</li> <li>• Determining team organization and structure</li> <li>• Basics of working in teams</li> <li>• Transferring leadership tasks</li> <li>• Project management und mediation</li> <li>• Dealing with conflicts in meetings and negotiations</li> <li>• Behavioral strategies in case of problems during project execution</li> <li>• Dealing with conflicts and team members or meeting participants</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Purchase and Tenancy Agreements</b>
Module Title (German)	Verträge aus Kauf- und Mietrecht
Code	5200
Language of Instruction	German
Recommended Semester(s)	5
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>• Developing comprehensive and interdisciplinary skills based on the previous law and technology modules</li> <li>• Designing and examining purchase and tenancy agreements independently</li> <li>• Analyzing and structuring agreements designed within the framework of purchasing and vending real estate</li> <li>• Developing the competence to design and negotiate contracts and to examine already existing contracts</li> <li>• Building upon and linking knowledge and skills related to contract design acquired in previous modules</li> <li>• Acquiring more detailed knowledge of the contractually sound design of purchase agreements with contractors</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Purchase and Tenancy Agreements</b>
Course Title (German)	Verträge aus Kauf- und Mietrecht
Language of Instruction	German
Recommended Semester(s)	5
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Consolidation: contracts according to <i>BGB</i> (German Civil Code) in the fields of purchase and tenancy law</li> <li>• Applicable legal norms from <i>BGB</i> (German Civil Code) and <i>VOB</i> (German Contracting Rules for Award of Public Works Contracts)</li> <li>• Addressing current court decisions based on verdicts reached by <i>Oberlandesgerichte</i> (German Higher Regional Courts) in the areas of purchasing and vending real estate, tenancy law and building law based on <i>VOB/B</i> (German Contracting Rules for Award of Public Works Contracts, Part B)</li> <li>• Designing contracts independently and explaining and understanding the consequences of different contract designs for project execution</li> </ul>
Credit Points	5 CP



<b>Module Title</b>	<b>Operative Construction Controlling</b>
Module Title (German)	Operatives Baucontrolling
Code	5300
Language of Instruction	German
Recom- mended Se- mester(s)	5
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Optimizing planning, construction, cost and deadline monitoring by using construction controlling and avoiding construction defects during the execution phase</li> <li>• Focusing on systematic monitoring (ex post, process-accompanying or ex ante) of costs and deadlines as well as examining the quality of planning documents or construction and service specifications and thereby identifying their flaws</li> <li>• Identifying project progression risks that could, for example, endanger the completion date or the construction budget</li> <li>• Developing the ability to take over necessary construction controlling tasks in the function of a technical representative of a project efficiently and to present and represent them vis-à-vis clients and third parties</li> <li>• Cooperating with commercial project controlling for reaching project targets</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Operative Construction Controlling</b>
Course Title (German)	Operatives Baucontrolling
Language of In- struction	German
Recommended Semester(s)	5
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Requirements of controlling systems of commercial enterprises</li> <li>• Methods for ensuring planned economic success in respective business processes</li> <li>• Controlling terms</li> <li>• Function and purpose of a controlling system in the respective building lifecycle</li> <li>• Controlling concepts and related controlling instruments plus requirements of economic corporate management</li> <li>• Particularities of technical controlling instruments in the real estate business</li> <li>• Dealing with contract award thresholds when commissioning construction companies and planners</li> <li>• Requirements of technical controlling and integration in the development calculation of real estate</li> <li>• Dealing with operating costs and unusual events</li> <li>• Creating, examining and updating KPI systems in order to generate clear and consistent assessment criteria in a company during the technical implementation of construction and maintenance measures</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Area Management</b>
Module Title (German)	Flächenmanagement
Code	5400
Language of Instruction	German
Recom- mended Se- mester(s)	5
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Applying real estate management and administration instruments</li> <li>• Creating utilization concepts from a technical point of view within the framework of real estate inventory management taking profitability assessment and calculation of overall return on an investment into account by analyzing construction costs</li> <li>• Developing the competence to take complex decisions based on individual technical facts by combining different construction variants</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Area Management</b>
Course Title (German)	Flächenmanagement
Language of In- struction	German
Recommended Semester(s)	5
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Technical tasks in building maintenance and value increase through construction measures</li> <li>• Basics of managing portfolio properties, including:</li> <li>• Managing living areas</li> <li>• Dealing with modernization in the area of tenancy law</li> <li>• Dealing with tenancy agreements with the aim of ensuring real estate sustainability</li> <li>• Charging apportionment costs</li> <li>• Managing commercial property</li> <li>• Profitability assessment and maintenance assessment of commercial property</li> <li>• Dealing with tenancy agreements for commercial property</li> <li>• Charges for and administration of buildings used for commercial purposes</li> <li>• Tasks of building administration and property management companies taking the requirements stipulated by the regulations on condominium/home ownership (<i>WEG</i>) and on dealing with part-owner associations into account</li> <li>• Conducting property owner meetings, taking minutes and keeping necessary records in the role of a property manager</li> <li>• Special real estate situations, such as shopping centers and hotels, within the framework of portfolio management</li> <li>• Technical guidelines, e.g. <i>DIN 277</i> (from the German Institute for Standardization), <i>GIF MFG</i> (from the German Society of Property Researchers) and others such as <i>Arbeitsstättenverordnung</i> (workplace ordinance).</li> <li>• Requirements of user-oriented area management looking at different ways of area utilization (usable area, common area, supplies area)</li> <li>• Requirements of common area management, upkeep and maintenance through structural improvements</li> <li>•</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Technical Asset Management</b>
Module Title (German)	Technisches Asset Management
Code	5500
Language of Instruction	German
Recom- mended Se- mester(s)	5
Module offe- red in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Discerning strategic opportunities for action of investors and implementing and assessing them in a structural engineering context</li> <li>• Understanding modern instruments of real estate portfolio management, investment banking and property management from a technical point of view in order to increase a property's value</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Technical Asset Management</b>
Course Title (German)	Technisches Asset Management
Language of In- struction	German
Recommended Semester(s)	5
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Presentation of real estate portfolio management and property management methods within technical boundary conditions and transfer to technical case studies, including – among others: <ul style="list-style-type: none"> <li>○ Analyzing and optimizing real estate investments and real estate portfolios from a technical point of view, such as conversion and maintenance measures</li> <li>○ Planning and controlling technical inspection and maintenance works as well as commissioning these works to technical service providers</li> <li>○ Complying with and supervising technical quality requirements and tasks, in particular tenancy agreement regulations and their quality assurance</li> <li>○ Coordinating with and supporting commercial asset management in order to keep the overall value of a property and a real estate portfolio</li> <li>○ Creating monitoring concepts for recurring technical inspections based on building law guidelines and regulations as well as on provisions stemming from the proceeding on the granting of building permissions</li> <li>○ Designing purchase processes systematically, including preceding technical due diligence</li> <li>○ Taking tax law particularities into account when making technical investments</li> </ul> </li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Practical Experience Phase</b>
Module Title (German)	Praxisphase
Code	6002
Language of Instruction	German
Recom- mended Se- mester(s)	6
Module offe- red in	Every year
Compen- tencies	<ul style="list-style-type: none"> <li>• Getting to know future workplaces and possible positions on the job market independently</li> <li>• Applying theoretical and scientific knowledge and technical skills acquired during studies in a company doing business in the field of real estate management</li> <li>• Gaining experience in a technical sector during the practical experience phase and thereby using acquired technical competence to act as an interface between mostly commercially trained colleagues in the real estate industry</li> </ul>
Credit Points	18 CP

<b>Course Title</b>	<b>Practical Experience Phase</b>
Course Title (German)	Praxisphase
Language of Instruction	German
Recommended Semester(s)	6
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Getting to know tasks and responsibilities in the field of technical real estate management</li> <li>• Preparing entry into professional life together with university supervisors</li> <li>• Working on tasks and solutions related to daily project business in a technical section of a company</li> </ul>
Credit Points	18 CP



<b>Module Title</b>	<b>Bachelor's Thesis and Thesis Defense</b>
Module Title (German)	Thesis inklusive Kolloquium
Code	6000
Language of Instruction	German
Recom- mended Se- mester(s)	6
Module of- fered in	Every year
Competen- cies	<ul style="list-style-type: none"> <li>• Working on a topic scientifically and independently, including interdis- disciplinary correlations, based on studies and on the technical and methodological competence developed in the field of real estate management</li> <li>• Assessing and evaluating technical details</li> <li>• Analyzing and examining related technical literature and technical knowledge acquired during studies critically and integrating this anal- ysis and examination into the thesis</li> </ul>
Credit Points	12 CP

<b>Course Title</b>	<b>Bachelor's Thesis and Thesis Defense</b>
Course Title (German)	Thesis inklusive Kolloquium
Language of Instruction	German
Recommended Semester(s)	6
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Technical consolidation of a study module or combination of several study modules at the end of the study program in order to lead into professional practice</li> <li>• Link to the practical experience phase module in the same semester</li> <li>• Possibility to combine the two modules in such a way that the topic of the bachelor's thesis can be developed and determined by the activities and tasks done during the practical experience phase in coordination with the company providing the practical experience placement</li> <li>• Focus on engineering, technical or business aspects with the business part accounting for maximum one third of the bachelor's thesis</li> <li>• Work on the bachelor's thesis for eight weeks, followed by an oral examination and a presentation of the major aspects of the bachelor's thesis</li> </ul>
Credit Points	12 CP

<b>Module Title</b>	<b>CAD for Facility Management and Inventory Data Collection</b>
Module Title (German)	CAD im FM und Bestandsdatenerfassung
Code	4810
Language of Instruction	German
Recommended Semester(s)	5
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>• Using CAD systems when planning, constructing and operating real estate</li> <li>• Developing the competence to utilize CAD systems for operating real estate independently and to do assessments</li> <li>• Evaluating existing CAD data for users of planning documents and databases</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>CAD for Facility Management and Inventory Data Collection</b>
Course Title (German)	CAD im FM und Bestandsdatenerfassung
Language of Instruction	German
Recommended Semester(s)	5
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Introduction to drawing and designing according to standards most commonly applied in Germany</li> <li>• Planning contents and visualization of the different work phases and the different trades</li> <li>• Introduction to AutoCAD and user-specific applications</li> <li>• Overview of the planning tools most often used in architecture and facility management</li> <li>• Aspects of 2D floor plans</li> <li>• Planning in the form of 3D designs</li> <li>• 4D planning</li> <li>• Tasks concerning the attribution of building parts</li> <li>• Planning requirements, in particular concerning construction and facility management</li> <li>• Contents of inventory planning necessary for facility management</li> <li>• Methods for collecting data about designated areas for rental area calculations and interfaces to building automation</li> <li>• Systematization of data structuring and modelling within the framework of CAFM systems</li> <li>• Assessing and managing CAFM data based on examples</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Certification and Planning Requirements CERT</b>
Module Title (German)	Zertifizierung und Planungsanforderungen CERT
Code	4820
Language of Instruction	German
Recom- mended Se- mester(s)	6
Module of- fered in	Every year
Compen- encies	<ul style="list-style-type: none"> <li>• Evaluating customary certification systems such as LEED, DGNB, etc.</li> <li>• Developing the competence to supervise and support respective certification steps and to already take them into account when planning real estate</li> <li>• Supervising and supporting the certification of sustainable building quality during the planning, construction and operation phase of a building independently</li> <li>• Managing planning processes and requirements for building facilities taking sustainability instruments of building certification into account during the planning, construction and operation phase of a building</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Certification and Planning Requirements CERT</b>
Course Title (German)	Zertifizierung und Planungsanforderungen CERT
Language of Instruction	German
Recommended Semester(s)	6
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• All customary certification systems for sustainable building quality, their foci, strengths and weaknesses</li> <li>• LEED certification and its process execution in the planning, construction and operation phase of a building</li> <li>• LEED certification requirement catalog</li> <li>• DGNB certification and its process execution in the planning, construction and operation phase of a building</li> <li>• DGNB certification requirement catalog</li> <li>• Applying the systems including their specific processes and tools independently within the framework of a practice exercise</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>International Real Estate Development</b>
Module Title (German)	Internationale Immobilienentwicklung
Code	4830
Language of In- struction	English
Recommended Semester(s)	6
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>• Learning about the mechanisms of the European real estate industry using selected examples of real estate projects in Europe</li> <li>• Focusing on the question of investment decisions taken by European investors in Germany</li> <li>• Knowing and understanding the respective market mechanisms of European investors</li> <li>• Estimating under which circumstances and framework conditions German investors invest in European projects</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>International Real Estate Development</b>
Course Title (German)	Internationale Immobilienentwicklung
Language of Instruction	English
Recommended Semester(s)	6
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Investment decisions of European investors in Germany</li> <li>• Investment decisions of German investors in Europe</li> <li>• Differentiating economic, tax and legal framework conditions for investing abroad</li> <li>• Different market situations based on selected examples from other European countries and their metropolises, e.g. London, Madrid and Paris</li> <li>• Particularities of Eastern European countries and their investment structures</li> </ul>
Credit Points	5 CP



<b>Module Title</b>	<b>Technical English 2</b>
Module Title (German)	Technisches Englisch 2
Code	4840
Language of Instruction	English
Recommended Semester(s)	6
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>• Enlarging and deepening knowledge of technical terms in English and applying them in conversations and in writing</li> <li>• Further developing language competence in English</li> <li>• Understanding international business behavior</li> <li>• Negotiating and assessing technical issues in English at an adequately high level</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Technical English 2</b>
Course Title (German)	Technisches Englisch 2
Language of Instruction	English
Recommended Semester(s)	6
Course offered in	Every year
Topics/Course Contents	Consolidation of: <ul style="list-style-type: none"> <li>• Technical listening comprehension skills</li> <li>• Negotiations and technical conversations in English</li> <li>• Text and vocabulary work, text analysis and writing practice on technical topics</li> <li>• Speaking skills</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Call for Tenders and Awarding Contracts for Planning and Construction Works (4850)</b>
Module Title (German)	Ausschreibung und Vergabe von Planungs- und Bauleistungen (4850)
Code	4850
Language of Instruction	German
Recommended Semester(s)	5
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>• Knowing the tasks of the different stakeholders involved in the tendering process</li> <li>• Applying the major tools used when calling for tenders and awarding contracts in practice, e.g. invitations to submit a tender, tender notices, tender (opening) minutes or award notices, and scheduling the different steps of the procedure</li> <li>• Knowing the legal prerequisites for a call for tenders for planning and construction works</li> <li>• Applying the different procedure types reliably in practice</li> <li>• Developing the ability to go through, analyze and give implementation recommendations for the processes of examining and evaluating tenders and awarding a contract from different perspectives (contracting entity, project management, architect)</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Call for Tenders and Awarding Contracts for Planning and Construction Works (4850)</b>
Course Title (German)	Ausschreibung und Vergabe von Planungs- und Bauleistungen (4850)
Language of Instruction	German
Recommended Semester(s)	5
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Basics of awarding contracts</li> <li>• Choosing the suitable form of tender</li> <li>• Problems of the tendering procedure / acting correctly throughout the process</li> <li>• Criteria for qualitative selection and for the award of the contract</li> <li>• Tender vetting (main tenders, variant solutions, alternative tenders)</li> <li>• Drawing up the contract award notice</li> <li>• Review procedure</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Contract and Claim Management in the Construction Industry</b>
Module Title (German)	Vertrags- und Nachtragsmanagement im Bauwesen
Code	4870
Language of Instruction	German
Recom- mended Se- mester(s)	5
Module of- fered in	Every year
Competen- cies	<p>Contract management is a way of supporting constructors and contractors before and when concluding construction contracts by contributing to the specification of required services, deadlines and technical framework conditions in contracts.</p> <p>Claim management is used in project implementation when filing, checking, negotiating and enforcing claims.</p> <ul style="list-style-type: none"> <li>• Knowing the operational and economic tasks and content of contract and claim management in the construction industry</li> <li>• Developing a contract risk and opportunities analysis independently</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Contract and Claim Management in the Construction Industry</b>
Course Title (German)	Vertrags- und Nachtragsmanagement im Bauwesen
Language of Instruction	German
Recommended Semester(s)	5
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Basics of contract and claim management</li> <li>• Contract management: specifying the construction target state/condition, documenting deviations from the contractual agreement, contract schedules</li> <li>• Controlling contracts and claims</li> <li>• Claim management: filing, checking and dealing with claims</li> <li>• Enforcing claims</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Regular Maintenance of Building Technology (4890)</b>
Module Title (German)	Regelinstandhaltung in der Gebäudetechnik (4890)
Code	4890
Language of Instruction	German
Recommended Semester(s)	5
Module offered in	Winter/Summer Semester
Competencies	<ul style="list-style-type: none"> <li>• Acquiring basic knowledge of maintenance strategies and their application in practice</li> <li>• Examining the different maintenance groups needing regular servicing according to <i>VDI</i> (Association of German Engineers), <i>VDMA</i> (German Network Organization for Mechanical and Plant Engineering), <i>VDE</i> (German Association for Electrical Engineering, Electronics and Information Technology) and <i>TWVO</i> (drinking water ordinance)</li> <li>• Acquiring the knowledge needed for distinguishing between necessary, legal and preventive measures</li> <li>• Calculating maintenance costs and defining requirements for companies providing a service</li> <li>• Developing a maintenance plan and examining existing plans with regards to weaknesses</li> <li>• Prioritizing measures</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Regular Maintenance of Building Technology (4890)</b>
Course Title (German)	Regelstandhaltung in der Gebäudetechnik (4890)
Language of Instruction	German
Recommended Semester(s)	5
Course offered in	Winter/Summer Semester
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Maintenance strategies, inspection intervals for the different maintenance groups of a building</li> <li>• Normative framework</li> <li>• Prevention in real estate operation</li> <li>• Correlation of maintenance costs with real estate project development</li> <li>• Practice examples</li> </ul>
Credit Points	5 CP



<b>Module Title</b>	<b>CAFM and Inventory Data Collection</b>
Module Title (German)	CAFM und Bestandsdatenerfassung
Code	4910
Language of Instruction	German
Recommended Semester(s)	5
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>• Using CAFM systems when planning, constructing and operating real estate</li> <li>• Developing the competence to utilize CAFM systems for operating real estate independently and to do assessments</li> <li>• Evaluating existing CAFM data for users of planning documents and databases</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>CAFM and Inventory Data Collection</b>
Course Title (German)	CAFM und Bestandsdatenerfassung
Language of Instruction	German
Recommended Semester(s)	5
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Core functionality of CAFM software and its maintenance group-specific modules</li> <li>• Advantages of supporting facility management processes by using CAFM systems</li> <li>• Relevant types of data in CAFM and evaluating their quality</li> <li>• Generating CAFM-compliant data during the real estate planning phase</li> <li>• Procedure model for inventory data collection and transfer of data into a CAFM system</li> <li>• Overview of the different architectures of CAFM systems and determining their advantages and disadvantages</li> <li>• Basics of data storage through CAFM software by connecting relational databases</li> <li>• Interfaces of CAFM systems, especially to the central building control system and ERP systems</li> <li>• Phase model for choosing, introducing and using a CAFM system</li> <li>• CAFM-relevant norms and guidelines</li> <li>• Practical exercise on the collection of area management data as well as graphic and tabular analysis with the CAFM system AT+C VM.7</li> <li>• Basics of AutoCAD and customer-specific applications</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>International Real Estate Economics</b>
Module Title (German)	International Real Estate Economics
Code	4920
Language of In- struction	German/English
Recommended Semester(s)	4/5
Module offered in	Winter or Summer Semester (according to schedule)
Competencies	<ul style="list-style-type: none"><li>• Applying economic theories and practice applications to specific case studies and topics of international real estate economics</li></ul>
Credit Points	5 CP

<b>Course Title</b>	<b>International Real Estate Economics</b>
Course Title (German)	International Real Estate Economics
Language of Instruction	German/English
Recommended Semester(s)	4/5
Course offered in	Winter or Summer Semester (according to schedule)
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Micro- and macro-economic basis of the case studies</li> <li>• Regional economic analysis and urban economics</li> <li>• Economic theory and practice of interest rate and currency management in open economies</li> <li>• Hedging strategies</li> <li>• Structures of international finance and currency politics (foreign trade policy)</li> <li>• Economic theory of games, behavioral finance and application to negotiation models in real estate economics</li> <li>• Application-oriented case studies on international real estate economics</li> <li>• Depending on group size: practice lectures and/or excursions to companies/institutions (corporate contacts)</li> <li>• Compiling own case studies for international real estate economics</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Financial Mathematics</b>
Module Title (German)	Finanzmathematik
Code	4930
Language of In- struction	German
Recommended Semester(s)	4/5
Module offered in	Winter or Summer Semester (according to schedule)
Competencies	<ul style="list-style-type: none"> <li>• Acquiring knowledge of elementary financial instruments, including derivative products</li> <li>• Mastering basic quantitative methods used for solving financial issues, in particular for evaluating financial instruments and for optimizing</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Financial Mathematics</b>
Course Title (German)	Finanzmathematik
Language of Instruction	German
Recommended Semester(s)	4/5
Course offered in	Winter or Summer Semester (according to schedule)
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Interest and compound interest calculation</li> <li>• Arithmetic and geometric series</li> <li>• Elementary financial instruments</li> <li>• Cash value and interest rate curves</li> <li>• Arbitrage and option valuation</li> <li>• Consolidating learned content based on practice examples from the real estate industry</li> </ul>
Credit Points	5 CP

<b>Module Title</b>	<b>Consolidation: Project Development</b>
Module Title (German)	Vertiefung Projektentwicklung
Code	4860
Language of Instruction	German
Recommended Semester(s)	5
Module offered in	Every year
Competencies	<ul style="list-style-type: none"> <li>• Acquiring knowledge of the five project development phases</li> <li>• Comprehending special development fields</li> <li>• Understanding project management as a combination of the following factors: users, location, project idea and capital</li> <li>• Acquiring knowledge of project development strategies</li> <li>• Assessing risks and opportunities of a project idea and construction task</li> <li>• Learning about goals and tasks of project development in order to prepare for and make real estate investments</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Consolidation: Project Development</b>
Course Title (German)	Vertiefung Projektentwicklung
Language of Instruction	German
Recommended Semester(s)	5
Course offered in	Every year
Topics/Course Contents	<ul style="list-style-type: none"> <li>• The five stages of project development</li> <li>• Letting and commercialization</li> <li>• Risks in project development</li> <li>• Disruptions in project development</li> <li>• Special themes of project development</li> <li>• Acquiring and applying knowledge independently within the framework of the exercise</li> </ul>
Credit Points	5 CP



<b>Module Title</b>	<b>Real Estate Market Statistics and Forecasts</b>
Module Title (German)	Immobilienmarktstatistik und -prognose
Code	4950
Language of In- struction	German
Recommended Semester(s)	4/5
Module offered in	Winter semester (according to schedule)
Competencies	<ul style="list-style-type: none"> <li>• Mastering basic methods of descriptive and inductive statistics</li> <li>• Acquiring knowledge of central time series for describing the real estate market, deriving forecasts and determining their uncertainty level</li> </ul>
Credit Points	5 CP

<b>Course Title</b>	<b>Real Estate Market Statistics and Forecasts</b>
Course Title (German)	Immobilienmarktstatistik und -prognose
Language of Instruction	German
Recommended Semester(s)	4/5
Course offered in	Winter semester (according to schedule)
Topics/Course Contents	<ul style="list-style-type: none"> <li>• Basic statistical terms and methods</li> <li>• Measures of location, dispersion/risk and concentration</li> <li>• Index series: structure, analysis, interpretation</li> <li>• Correlation and regression analysis</li> <li>• Basics of probability theory</li> <li>• Special distribution functions</li> <li>• Hypothesis testing and confidence intervals</li> <li>• Consolidating acquired knowledge based on practice examples from the real estate industry</li> </ul>
Credit Points	5 CP