MB 1 Cultural Sciences
Architectural History I + II, History of Urban Development, Architectural Theory

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	240 h	2 CP 2 CP 2 CP 2 CP	2nd sem. 3rd sem. 2nd sem. 3rd sem.	Summer semester Winter semester Summer semester Winter semester	2 semesters

Teaching	Contact time	Home study	Planned size of group
MB 1.1: 2nd sem. Lecture	2 SPW / 30 h	30 h	whole semester
MB 1.2: 3rd sem. Lecture	2 SPW / 30 h	30 h	
MB 1.3: 2nd sem. Lecture	2 SPW / 30 h	30 h	
MB 1.4: 3rd sem. Lecture	2 SPW / 30 h	30 h	

Learning outcomes / competencies

MB 1.1 Architectural History I and MB 1.2 Architectural History II:
The course in Architectural History aims to create a lively continuum between the past and the future of building, and to thereby release creative potential in the area of design and construction. The course in Architectural History teaches the mental disassembly and reassembly of the subject of architecture, and therefore, how a building works, the factors that determine its design, and how it is evaluated. Gaining these key competencies places the student in the position of being able to learn about architecture as a whole and to therefore correlate the relationship between the exterior appearance, the interior and exterior structure, the construction and the configuration of the building.

MB 1.3 History of Urban Development:
Knowledge is provided on the functional and formal development of the European city (in particular) as well as an overview of urban development since antiquity, in addition to the context between urban society, its requirements concerning urban development, and the associated instruments for the implementation of urban development ideas. A discussion of the "history" of the key elements of urban development takes place: the structure of the development, the construction and the plot; the students learn the vocabulary that enables them to decipher urban layouts and their historical classification.
During the course, the relationship between the nature of urban development and the social, political, economic and structures that determine it should be clarified; also, awareness for the responsible handling of the cultural heritage of the urban environment and its history-conscious further development should be awakened.

MB 1.4 Architectural Theory:
The students should be motivated to consider architecture in terms of its international contexts and to learn about its influences and dependencies in terms of the prevailing cultural, political and social trends. Sharpening of the powers of aesthetic judgement and the ability to discuss and to substantiate architectural designs on the basis of ideas and to express them accordingly are further key competencies, the gaining of which the teaching aims to support.

MB 1.1-1.4 Key competencies:
Practice should be provided in dealing with academic documents and academic learning.

Contents

MB 1.1 Architectural History I and MB 1.2 Architectural History II:
The subject matter of the subject of the Architectural History ranges from the origins of building to contemporary architecture. The consideration of this subject matter has a global approach, and principally addresses all eras, cultures, regions and types of building on an equal basis. The subject matter is structured on the basis of universal questions (e.g. religion, power, emotion, etc.). So-called "elevators" also provide it with a temporal dimension on a repeated basis. The incorporation of creative and intuitive elements draws reference to the architect's method of working. The number of buildings dealt with in a single lecture is limited to the extent that the individual decisions of the architects in question can be made clear. The decisive authority in terms of the reception of the subject matter is the plausibility of the content which is presented.

MB 1.3 History of Urban Development:
The key content is the development of the urban structure and the coming into being of the form of urban development (the structure of the development, the plot and the building) from antiquity until the 20th century. The relationship between urban development and urban functions in the context of the social, economic and social conditions during the individual eras will be presented in detail. The two core elements are primarily highlighted in chronological order. For the 19th and 20th centuries, a strong focus will be made on the changing planning conditions, the new urban problems and tasks, as well as the instruments of urban development and approaches to reform.

MB 1.4 Architectural Theory:
In the course on Architectural Theory, the basic designs (space, body, shape, purpose, style, etc.) and methods (historical, phenomenological, epistemological, semiotic, structural, culturally philosophical, aesthetic, anthropological, ethical, etc.) of the reflection on architecture, as well as a range of interpretation models regarding such by famous architects from antiquity to the present day, and by scholars of other academic disciplines such as philosophy, literary sciences, psychology, maths, etc. are discussed The latter takes place under special consideration of the mutually complementary nature of theory and design. In this context, architectural theory is not simply understood as being the sum total of the aforementioned factors, but rather, it argues as a reflective science on a meta level with the goal of formulating both the variety of the interpretations of architecture as well as its instruments, and above all else, its authority.

Teaching format

MB 1.1 Architectural History I and MB 1.2 Architectural History II:
60 hours of lectures, 60 hours of independent study and examination preparation

MB 1.3 History of Urban Development:
30 hours of lectures, 30 hours of independent study and examination preparation

MB 1.4 Architectural Theory:
30 hours of lectures, 30 hours of independent study and examination preparation

Requirements for attending course: None

Examination format

MB 1.1: 60 minute examination
MB 1.2: 60 minute examination
MB 1.3: 60 minute examination
MB 1.4: 60 minute examination

The students sit the exams at the start of the non-teaching time at the end of the semester; the exams can be retaken before the start of the following semester.
Requirement for the awarding of credit points Completion of the individual module assignments with a grade of at least 4.0. The individual grades are incorporated in the grade for the overall module according to their proportion of credit points (2/8, 2/8, 2/8, 2/8).
Weighting of the grade for the final grade 8/180 (4.44 %)
Module leader(s) and principal tutor(s) Prof. Dr. Dr.-eng. Karl Kiem, Prof. Dr.-eng. Hilde Schröteler-von Brandt, Associated Prof. Dr. phil. Petra Lohmann
Additional information: **---**

MB 2 Basics of Design

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	390 h	5 CP 2 CP 5 CP 1 CP	1st sem. 1st sem. 2nd sem. 2nd sem.	Winter semester Winter semester Summer semester Summer semester	2 semesters

Teaching	Contact time	Home study	Planned size of group
MB 2.1: 1st sem. Lecture Tutorial	2 SPW / 30 h 2 SPW / 30 h	90 h	Lectures: whole semester Tutorials: up to 20;
MB 2.2: 1st sem. Design workshop	1 SPW / 15 h	45 h	Design Workshop: up to 15
MB 2.3: 2nd sem. Lecture Tutorial	2 SPW / 30 h 1 SPW / 15 h	105 h	
MB 2.4: 2nd sem. Design workshop	1 SPW / 15 h	15 h	

Learning outcomes / competencies

Promotion of creativity and "learning how to see" and approaching approaches for solutions. Recognising the variety of relationships between the requirements, boundary conditions and influences on the architectural design.

The goal is to achieve the confident and independent handling of people and space in terms of the realisation of high quality interior and exterior architectural space.

A particular goal is to analyse the framework conditions of the location and to learn the actual definition of the goal-setting and the phase-based development of the design. The testing out of alternatives at any time of the planning, the work on the model and on the drawing, as well as the shared discussion and the presentation in the group for the strengthening of the critical abilities and the ability to get things done are the key points of focus.

Contents

MB 2.1 Basics of Design 1st sem.:
The course provides an introduction to the complex relationships of architectural design with the following topics: design pragmatics, design systematics and design methods, as well as the principles of architecture and design theory.

In the 1st semester, the focus is on the design pragmatics (basic design-related factors such as room sizes, roaming areas, orientation of living quarters, site development systems, etc.) as well as the basic principles of architecture and design theory in terms of the special factor of the development of modern design and its influences on current architectural trends.

MB 2.2 Project Week 1st sem.:
In a Design Workshop with a local presence, the students are confronted with the variety of the dependencies that exist surrounding architectural and design decisions.
All "Design", and in the 1st semester the teaching staff in the department supervise a manageable project together.

MB 2.3 Basics of Design 2nd sem.:
In the 2nd semester the focus is on design systematics and methods (approaches during the design process, structuring of the subject matter according to specialist areas and functional contexts, critical discussion), and the in-depth handling of individual architectural elements, such as construction, site development systems, façades, windows, materials, regarding their impact on the design (with a direct correlation to an independently developed design task). Additionally, the user behaviour and the resulting requirements of the construction tasks are considered with examples.

MB 2.4 Project Week 2nd sem.:
In a Design Workshop with a local presence, the methodological approaches during the design process are deepened on the basis of a separate task.
All "Design", and in the 2nd semester the teaching staff in the department supervise a manageable project together.

Teaching format

MB 2.1: 1st sem.: 30 hours of lectures, 30 hours of supervised tutorials, 5-6 supervised individual tutorials (elementary tutorials), 90 hours of independent study and tutorial preparation

MB 2.2: 1st sem.: 60 hours Design Workshop (project week: 15 hours of supervised work and 45 hours of independent work)

MB 2.3: 2nd sem.: 30 hours of lectures and 15 hours of supervised tutorials, 105 hours of independent study, one semester-long, sophisticated Design Tutorial in a group of two (role play between architect and building owner)

MB 2.4: 2nd sem.: 30 hours Design Workshop (project week: 15 hours of supervised work and 15 hours of independent work)

Requirements for attending course: None:

Examination format

MB 2.1: 1st sem.: Submission and presentation of the tutorials from the 1st sem.

MB 2.2: 1st sem.: Presentation of the work from the Design Workshop

MB 2.3: 2nd sem.: Submission and presentation of the semester-long Design Tutorial from the 2nd sem.

MB 2.4: 2nd sem.: Presentation of the work from the Design Workshop

Requirement for the awarding of credit points

Completion of the semester assignments, each with a grade of at least 4.0.
The individual grades are incorporated in the overall grade according to the proportion of CP (5/13, 2/13, 5/13, 1/13).

Weighting of the grade for the final grade: 13/180 (7.22%)

Module leader(s) and principal tutor(s) Prof. Dipl.-eng. Sibylle Käppel-Klieber

Additional information:

MB 3 Design I

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	150 h	3 CP 2 CP	1st sem. 1st sem.	Winter semester	1 semester

Teaching	Contact time	Home study	Planned size of group
MB 3.1: 1st sem. Lecture Tutorial MB 3.2: 1st sem. Tutorial	1 SPW / 15 h 2 SPW / 30 h 2 SPW / 30 h	45 h 30 h	Lecture: whole semester; Tutorials: up to 20

Learning outcomes / competencies

MB 3.1 Architectural Representation / Freehand Drawing / Typography:
Developing skills in spatial imagination and developing the ability to recognise, analyse and resolve complex relationships. In addition, learning the "language and grammar" of spatial representation.

- Basic theoretical knowledge of the history of architectural drawing
- Tutorials in the basic knowledge of geometric and organic drawing techniques
- Basic theoretical knowledge of typography.

MB 3.2 Model Making:
Implementation of design ideas in a dimensional, spatial presentational model under consideration of the required degree of abstraction and an independent architectural language.
Confidence in the selection and use of a variety of different model making materials in the context its visual and tactile effect. Application of different tools and machines and their safety-relevant factors.

MB 3.1 and MB 3.2:
Teaching techniques in the presentation and the readability of the results and/or the architectural models.

Contents

MB 3.1 Architectural Representation / Freehand Drawing / Typography:

- Sketching and drawing techniques
- Introduction to perspective drawings
- Compositional experimentation
- Free perspectives in the exterior and interior realm

MB 3.2 Model Making:

- Implementation of spatial ideas using tectonic elements in an initial specific reality
- Teaching and practical implementation of dimensional design techniques
- Modelling techniques

Teaching format

MB 3.1 Architectural Representation / Freehand Drawing / Typography:
15 hours of lectures, 30 hours of tutorials and 45 hours for home study

MB 3.2 Model Making:
30 hours of lectures, 30 hours of independent study

Requirements for attending course: None

Examination format

MB 3.1 Architectural Representation / Freehand Drawing / Typography: The final grade is determined by the arithmetical mean of the tutorials in the practical and theoretical contents of the teaching. At least 75 % of the tutorials have to have a grade of at least 4.0.
MB 3.2 Model Making: Presentation of the practical work

Requirement for the awarding of credit points

Completion of each of the individual module assignments with a grade of at least 4.0.
The individual grades are incorporated in the grade for the overall module according to their proportion of credit points (3/5, 2/5).

Weighting of the grade for the final grade: 5/180 (2.77 %)

Module leader(s) and principal tutor(s)

Prof. Dipl.-eng. Götz Stöckmann, Dipl.-eng. Matthias Arnold

Additional information:

MB 4 Design II.1 /CAD

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	240 h	4 CP 4 CP	2nd sem. 2nd sem.	Summer semester	1 semester

Teaching	Contact time	Home study	Planned size of group
MB 4.1: 2nd sem. Lecture	2 SPW / 30 h		Lecture: whole semester; Tutorials: up to 20
Tutorial	2 SPW / 30 h	60 h	
MB 4.2: 2nd sem. Lecture	2 SPW / 30 h		
Tutorial	1 SPW / 15 h	75 h	

Learning outcomes / competencies

MB 4.1 Design Theory / Colour Design / Graphic Composition Design Theory:
Teaching the general capacity of critical judgement and the classification and formulation of individual projects in the context of architectural and artistic activity. Supporting teaching strategies in the area of craftsmanship and the specialist ability to complete tasks.
Basic theoretical knowledge regarding the geometric space and the design object.

Colour Design / Graphic Composition:
Further development of the spatial imagination skills. Development of the ability to recognise, analyse and resolve complex relationships. In addition, learning the "language and grammar" of spatial representation

- Basic theoretical knowledge of colour theory
- Tutorials in the basic knowledge of colour drawing techniques.

MB 4.2 Computer Aided Architectural Design:
The students gain basic knowledge of data processing and an overview of the use of CAD in architecture (CAAD) so that they can realise design/or planning projects. Upon successful completion of the module, the students will have the following skills/knowledge:

- The use of scale levels
- Differentiation/evaluation of grid data / vector data
- Knowledge of the configuration and functioning of a modern CAD program
- The ability to structure drawing tasks
- The use of a CAD program to create digital 2D drawings
- Knowledge of CAD 3D and model making using parameter-capable components (BIM)
- Theoretical knowledge of computer aided architectural model making and the methods of realistic representation
- Knowledge of interfaces for the further processing of CAD data

Key qualifications:
Basic knowledge of computer aided drawing in 2D and component-oriented modelling in 3D, as well as the subsequently derived 2D drawings and image data and their further preparation.

Contents

MB 4.1: Design Theory / Colour Design / Graphic Composition Design Theory:

- Teaching the basic principles of visual / tactile design and visual languages
- Teaching the key differences between drawing, coloured design, graphic design, design, three dimensional configuration and the media-related differences of representation
- Theory and history of design and teaching of aesthetic perception

Colour Design / Graphic Composition:

- Introduction to painting techniques
- Colour composition
- Colour drawing, especially water colouring
- Introduction to graphic techniques and auxiliary products
- Graphic composition
- Graphic design as a component of architectural composition

MB 4.2 Computer Aided Architectural Design:
After teaching the basic principles of information technology (grid- and vector data processing), teaching is provided on a focused basis in the basic principles of CAD in 2D and 3D as well as the interfaces for the further use of CAD data (print and screen).

Teaching format

MB 4.1 Design Theory / Colour Design / Graphic Composition:
30 hours of lectures, 30 hours of tutorials and 60 hours for home study

MB 4.2 Computer Aided Architectural Design:
Lectures and one supervised tutorial
30 hours of lectures, 15 hours of tutorials and 75 hours for the independent study

Requirements for attending course: None

Examination format

MB 4.1 Design Theory: Two graded sit-down tutorials completed during the semester
Colour Design / Graphic Composition: The grade is determined by the arithmetical mean of the graded practical tutorials that are completed during the semester.

MB 4.2 Computer Aided Architectural Design:
Completion of a digital technical construction drawing as the preliminary work for an examination (60 min.)

The students sit the exams at the start of the non-teaching time at the end of the semester; the exams can be retaken before the start of the following semester.

Requirement for the awarding of credit points

Completion of each of the individual module assignments with a grade of at least 4.0.
MB 4.1: The arithmetical mean of the two graded sit-down tutorials that are completed during the semester, and the grade which is determined by the arithmetical mean of the practical tutorials that are completed during the semester each form 50% of the grade for the individual module.

MB 4.2: Examination grade The grades for the individual modules are incorporated in the grade for the overall module according to their proportion of credit points (4/8, 4/8).
Weighting of the grade for the final grade: 8/180 (4.44 %)
Module leader(s) and principal tutor(s) Prof. Dipl.-eng. Götz Stöckmann, Prof. Dipl.-eng. Michael Lenhart
Additional information: **----**

MB 5 Design II.2 / Multimedia Systems

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	150 h	2 CP 3 CP	3rd sem. 3rd sem.	Winter semester	1 semester

Teaching	Contact time	Home study	Planned size of group
MB 5.1: 3rd sem. Tutorial MB 5.2: 3rd sem. Lecture Tutorial 1, SPW	2 SPW / 30 h 2 SPW / 30 h 1 SPW / 15 h	30 h 45 h	Lecture: whole semester; Tutorials: up to 20

Learning outcomes / competencies

MB 5.1 Dimensional / Spatial Representation:
Planning the urban realm and its buildings not only on the functional and construction-related levels, but also according to design-based criteria, meaning the ability to create dimensional and tactile spatial qualities.

- Tutorials providing basic knowledge of analogue 3D modelling with relief, sculpture and architecture

MB 5.2 Multimedia Systems:
The students gain basic knowledge of multimedia systems and their practical application, their expertise using design media is consolidated. Upon successful completion of the module, the students will have the following skills/knowledge:

- Basic knowledge of HTML
- Knowledge of grid-based data processing and its practical application
- Knowledge of the configuration and functioning of a CMS (content management system)
- The use of a CMS for the web-based creation and management of contents
- Differentiation and evaluation of virtual reality - augmented reality
- Basic knowledge of animation and interaction.

Key qualifications:
Development of expertise using design media as well as information filtering and knowledge transfer using digital media.
Consideration of data protection related matters (such as the administration of user rights, copyright law regarding image formats, etc.)

Contents

MB 5.1 Dimensional / Spatial Representation:
Discussing space, volume, inter-space, context, surface structures, full dimensional and relief drawings as well as texture in detail, and examining them in practical tutorials.

MB 5.2 Multimedia Systems:
In addition to web applications and HTML programming, teaching is provided in multimedia presentation techniques and internet-capable presentation techniques for specialist contents.

Teaching format

MB 5.1 Dimensional / Spatial Representation:
30 hours of tutorials, 30 hours of home study
MB 5.2 Multimedia Systems:
Lectures and 1 supervised tutorial
30 hours of lectures, 15 hours of tutorials and 45 hours for independent study

Requirements for attending course: None

Examination format

MB 5.1 Dimensional / Spatial Representation:
The grade is determined by the arithmetical mean of the graded practical tutorials which are completed during the semester.
MB 5.2 Multimedia Systems:
Completion of a multimedia project as the preliminary work for an examination (60 min.)

The students sit the examination at the start of the non-teaching time, in the event of failure the exams can be retaken before the start of the following semester.

Requirement for the awarding of credit points

Completion of the semester assignments and an examination in MB 5.2, each with a grade of at least 4.0. The individual grades for the modules are incorporated proportionally in the overall grade 2/5 and 3/5.

Weighting of the grade for the final grade: 5/180 (2.77%)

Module leader(s) and principal tutor(s)

Prof. Dipl.-eng. Götz Stöckmann, Prof. Dipl.-eng. Michael Lenhart

Additional information:

MB 6 Building Construction I and Materials Science

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	330 h	4 CP 3 CP 4 CP	1st sem. 1st sem. 2nd sem.	Winter semester Winter semester Summer semester	2 semesters

Teaching	Contact time	Home study	Planned size of group
MB 6.1: 1st sem. Lecture	2 SPW / 30 h		
Tutorial	1 SPW / 15 h	75 h	Lecture: whole semester; Tutorials: up to 20
MB 6.2: 1st sem. Lecture	1 SPW / 15 h		
Tutorial	1 SPW / 15 h	60 h	
MB 6.3: 2nd sem. Lecture	2 SPW / 30 h		
Tutorial	1 SPW / 15 h	75 h	

Learning outcomes / competencies

In the 1st Building Construction module, basic knowledge is provided on primary designs in accordance with the corresponding material. This introduction to the relationships and dependencies of building construction should enable the students to recognise the relationship between construction, material and design.

Understanding different construction methods is made tangible on the basis of individual pilot projects. At the same time, the possibilities and limits regarding the different building structures and construction methods become identifiable and clear.

Using analyses of the architecturally integrated buildings and structural designs, the dependency of the structures and their corresponding creation of space on the basis of the primary construction and its materials are shown, whereby the relationship between construction, function and architecture is clarified.

Key competencies:
- Introduction to academic work + learning of the different research possibilities
- Practising the bringing together of the artistic and technical aspects of our built environment
- Training in presentation techniques
- Raising awareness for sustainable building.

Contents

MB 6.1: 1st sem.: Building Construction I, Primary Structures
This subject initially provides a basic understanding of the construction-related contexts on the basis of different construction methods and the typical materials that are used in the construction methods:

- Solid construction, material reference: clay, brick, concrete, natural stone
- Skeleton construction, material reference: wood, steel, concrete
- Panel construction, material reference: brick, wood, steel, concrete
- Tensile-stressed construction, material reference: steel, fabric, membrane
- Mixed construction, material reference: open

MB 6.2: 1st sem.: Materials Science
In the Materials Science course, basic knowledge on the primary and most important materials used in buildings today are presented and explained. This relates to the obtaining, production and processing, the basic constructional and physical attributes of the material, as well as the derivable areas of application and/or use, including the economic aspects.
Furthermore, on the basis of sample templates and examples of architecture, the dependencies between the materials that are presented and the design-related options are conveyed before the background of the general relationship between the choice of building materials and the quality of the architecture.

MB 6.3: 2nd sem.: Building Construction I, Primary Structures
As the course progresses, basic knowledge on the theoretical, constructional and physical attributes of the materials

- natural stone
- bricks and masonry

as building materials, as well as the primary constructions developed using these materials is conveyed in terms of their overall context as a construction principle through to design-dependent detailed solutions in their large-scale implementation according to the state of the art. Using building analyses with examples from the different eras of building design, their construction- and material-specific design attributes, their manufacturing methods, and their economic aspects are made clear.

Teaching format

MB 6.1: 1st sem. 30 hours of lectures and 15 hours of supervised individual or group tutorials and 75 hours for the independent development of the tutorials.

MB 6.2: 1st sem. 15 hours of lectures and 15 hours of assignments/tutorials or presentation, and 60 hours of independent development.

MB 6.3: 2nd sem. 30 hours of lectures and 15 hours of supervised individual or group tutorials and 75 hours for the independent development of the tutorials.

Requirements for attending course:
MB 6.1 and **MB 6.2:** None
MB 6.3: It is necessary for the student to have successfully completed module element MB 6.1. (75% of the tutorials in module MB 6.1 have to have a minimum grade of sufficient (4.0)).

Examination format

Compulsory participation in all of the tutorials in modules MB 6.1 and MB 6.3
Building Construction I from the 1st and 2nd semester, a max. of 4 tutorials in each case, of which 2 sit-down tutorials and 4 of the partial tutorials in module MB 6.2 – Materials Science in the 1st sem.

Requirement for the awarding of credit points

75% of the tutorials in module MB 6.1 and 75% of the tutorials in module MB 6.3 have to have a minimum grade of sufficient (4.0).
The tutorials in module MB 6.2 also have to have a minimum grade of sufficient (4.0).
The grades in modules MB 6.1 - 6.3 are determined by the arithmetical mean of the entire module tutorials completed.
The composition of the module grades takes place according to the credit points of the partial modules with 4/11; 3/11 and 4/11.

Weighting of the grade for the final grade: 11/180 (6.11%)
Module leader(s) and principal tutor(s) Prof. Dipl.-eng. Thomas Dibelius, Prof. Dipl.-eng. Sibille Wirtz, Prof. Dr.-eng. Mathias Wirths
Additional information: ---

MB 7 Supporting Structures

	Workload	Credit points	Study semester	Frequency	Duration
	180 h	3 CP 3 CP	1st sem. 2nd sem.	Winter semester Summer semester	2 semesters

Teaching	Contact time	Home study	Planned size of group
MB 7.1: 1st sem. Lecture Tutorial MB 7.2: 2nd sem. Lecture Tutorial	2 SPW / 30 h 1 SPW / 15 h 2 SPW / 30 h 1 SPW / 15 h	45 h 45 h including examination preparation	Lecture: whole semester; Tutorials: up to 20

Learning outcomes / competencies

- The ability to identify and analyse the elements of the structural designs of buildings
- Architecturally-based measurement of straightforward structural elements (materials, cross section development, node configuration)
- Basic knowledge of the contents, terminology and methods for dealing with sophisticated structural systems
- Basic knowledge of the contents, terminology and methods for the dialogue with the structural engineer.

Key competencies:

- General knowledge of natural sciences and technical knowledge
- Structured and independent working
- Expertise in transfer services.

Contents

The teaching of facts and methods for determining both the load and the load-bearing capacity of the elements of the supporting structure.
Explanatory keywords:

- Load determination, load transfer, materials, cross sections, internal forces
- Analytical and graphic methods, tension rods, pressure rods, bending girders, dimensioning, joints.

Teaching format

MB 7.1: 30 hours of lectures and 15 hours for 4 compulsory supervised tutorials and 45 hours of independent study
MB 7.2: 30 hours of lectures and 15 hours for 4 compulsory supervised tutorials and 45 hours of independent study including examination preparation.

Requirements for attending course: None

Examination format

Examination after the 2nd semester (duration 120 min.)
Requirement for participation: Successful participation in 75% of the corresponding tutorials in modules MB 7.1 and MB 7.2.

The students sit the examination at the start of the non-teaching time; the examination can be retaken before the start of the following semester.
Requirement for the awarding of credit points Completion of 75% of the semester assignments as recognised course-assessed, graded tutorials and the examination, each with at least 4.0. The grade for the examination is incorporated as one third of the final grade for the module, with one third of the arithmetical mean of the grades from the 1st semester and one third of the arithmetical mean of the grades from the 2nd semester.
Weighting of the grade for the final grade: 6/180 (3.3 %)
Module leader(s) and principal tutor(s) Prof. Dr.-eng. Thorsten Weimar
Additional information: ---

MB 8 Building Construction II.1 / Building Physics I

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	180 h	3 CP 3 CP	3rd sem. 3rd sem.	Winter semester Winter semester	1 semester

Teaching	Contact time	Home study	Planned size of group
MB 8.1: 3rd sem. Lecture Tutorial 3rd semester MB 8.2: 3rd sem. Lecture Tutorial 3rd semester	2 SPW / 30 h 1 SPW / 15 h 2 SPW / 30 h 1 SPW / 15 h	45 h 45 h	Lecture: whole semester; Tutorials: up to 20

Learning outcomes / competencies

MB 8.1 Building Construction II.1:
In addition to the continuation of teaching basic knowledge on primary structures, the Building Construction II.1 module focuses on the secondary structures of a building. The goal of the teaching is to be able to understand the building, the supporting structure and basic knowledge on building construction as a whole, and to grasp the secondary structures as a combinable system in relation to the primary structure, with mutual interactions and dependencies.
The relationship between the basic knowledge gained on building physics, the principles of design, and building construction should become clear, functioning as the requirement for independent, selectable and responsible architectural planning and action. The merger of the secondary structures with the primary structures of a building, and the resulting possible appearance as a whole and in terms of the individual design details forms an important part of this educational step.

MB 8.2 Building Physics I:
The goal is to understand the relationships between the building and the environment on the one hand and the building and the user on the other. In this respect, the factors of heat, damp, fire safety, and energy are the key focus. Students should gain knowledge of the principles, and be able to apply these to the designs according to the climate conditions, requirements, use, etc., and take the requirements regarding the user-friendliness, the durability, the period without structural damage, and the resource efficiency into account. This relates to the materials, the layers and the assembled building components through to the structures.

Key competencies
In the area of Building Construction, the students should be enabled to evaluate, modify and add to the basic knowledge that they have gained, and to use it on a targeted architectural basis within the implementation planning and detailed planning.
In the subject of Building Physics, the awareness for sustainable and sustainable building should result.

Contents

MB 8.1 Building Construction II.1, Primary Structures, Secondary Structures:
Parallel with the Building Construction I module, this module continues with the teaching of the basic theoretical knowledge as well as the knowledge relating to building construction and building physics, focusing on the material of wood and the construction principles and primary structures which are developed from it.

At the same time, and in the direct context of the primary structures, the basic knowledge on building construction relating to the secondary structures of a building is taught and deepened using

The build-feasible details of the construction:

- sealing, insulation, floor, wall and ceiling cladding
- glass façades, façade cladding
- sound insulation, fire protection, corrosion protection
- surfaces.

The above topics regarding secondary constructions concern the following in particular:

- vertical and horizontal building components in the ground
- over-ground wall and ceiling constructions and their openings
- flat and inclined roof constructions and their openings

MB 8.2 Building Physics I:

In Building Physics I, the basic relationships between the user, the building and the environment are explained as well as the relations pertaining to the building physics. The requirements surrounding health, comfort, safety and resource efficiency are explained. Furthermore, the requirements surrounding thermal insulation, humidity protection and the fire safety of the building components and/or buildings are highlighted, and the methods of evaluation, certification and assessment are explained.

The lectures and tutorials include:

- Basic contexts: Buildings and users, buildings and environment
- Basic principles of energy-efficient and climate-conscious building
- Terms and principles of heat transfer: radiation, conduction, convection
- Stationary heat conduction, thermal insulation in the winter
- Transient heat conduction, thermal insulation in the summer
- The requirements and proof according to standards and regulations
- Multi-dimensional heat conduction, thermal bridges; prevention, gathering and evaluation
- Requirements, terminology, construction materials and structures of building fire safety systems

Teaching format

MB 8.1: 3rd sem.: 30 hours of lectures, 15 hours for a max. of 4 supervised individual or group tutorials, of which 2 sit-down tutorials and 45 hours for independent study

MB 8.2: 3rd sem.: 30 hours of lectures, 15 hours of tutorials and 45 hours for independent study

Requirements for attending course

MB 8.1: Successful completion of module MB 6 - Building Construction and Materials Science
MB 8.2: None

Examination format

MB 8.1: Compulsory participation in all of the tutorials in the module
MB 8.2: Successful completion of all tutorials during the semester

Requirement for the awarding of credit points

75% of the tutorials of module MB 8.1 and all tutorials of module MB 8.2 have to have a minimum grade of sufficient (4.0).
The grades in modules MB 8.1 Building Construction II.1 and 8.2 - Building Physics are determined by the arithmetical mean of all the module tutorials completed.
The composition of the module grades takes place according to the credit points of the partial modules with 3/6 and 3/6.

Weighting of the grade for the final grade: 6/180 (3.33 %)
Module leader(s) and principal tutor(s) Prof. Dipl.-eng. Thomas Dibelius, Prof. Dipl.-eng. Sibille Wirtz, Prof. Dr.-eng. Lamia Messari-Becker
Additional information: ---

MB 9 Building Construction II.2 / Structural Design

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	240 h	3 CP 3 CP 2 CP	4th sem. 4th sem. 4th sem.	Summer semester Summer semester Summer semester	1 semester

Teaching	Contact time	Home study	Planned size of group
MB 9.1: Lecture Tutorial MB 9.2: Lecture Tutorial MB 9.3: Integrated Tutorial Building Construction and Structural Design	2 SPW / 30 h 1 SPW / 15 h 2 SPW / 30 h 1 SPW / 15 h 2 SPW / 30 h	45h 45 h 30 h	Lecture: whole semester; Tutorials: up to 20

Learning outcomes / competencies

MB 9.1 Building Construction II.2:
In addition to the continuation of teaching basic knowledge on primary structures, the partial module of Building Construction II.2 module focuses on the secondary structures of a building. The goal of the teaching is to be able to understand the building, the support structure and basic knowledge on building construction as a whole, and to grasp the secondary structures as a combinable system in relation to the primary structure, with mutual interactions and dependencies.
The relationship between the basic knowledge gained on building physics, the principles of design, and building construction should become clear, functioning as the requirement for independent, selectable and responsible architectural planning and work. The merger of the secondary structures with the primary structures of a building and the resulting possible appearance as a whole and in terms of the individual design details is an important part of this educational step.
The students should be enabled to evaluate the basic knowledge that they have gained, to modify it and add to in relation to the specific task, and to use it on a targeted architectural basis within the implementation planning and detailed planning.

MB 9.2 Structural Design:
- Extension of the repertoire to include structural design
- Training in the ability to analyse the structural design of buildings, to develop the appropriate structural designs for buildings, and to be able to evaluate the dimensions of the associated structural elements – with the precision required during the design phase
- Having the necessary content-, terminology- and methodical knowledge for dealing with sophisticated structural systems
- Deepening of the content, terminology and methodical expertise for the dialogue with the structural engineer
- Training in the ability to develop appropriate and economically efficient structural design in the scope of the overall design.

MB 9.3: Integrated Tutorial Building Construction and Structural Design:
The learning contents of both subjects should be applied in an integrated tutorial.
The aim of the integrated tutorial is to clarify the relationship between both of the specialist areas in terms of the direct specialist analysis.

Key competencies:
- Practising practically-oriented group work / the ability to work on a cooperative basis in the group
- Resolution of conflicts and structuring of the work process.

Contents

MB 9.1 Building Construction II.2, Primary Structures, Secondary Structures

Parallel with the Building Construction II.1 module, this module continues with the teaching of the basic theoretical knowledge as well as the knowledge relating to building construction and building physics, focusing on the materials of

- steel and reinforced concrete

as well as the construction principles developed from these materials and the primary structure.

At the same time, and in the direct context of the primary structures, the basic knowledge on building construction relating to the secondary structures of a building is taught and deepened using examples as well as the students' own implementation plans through to the build-feasible construction detail:

- sealing, insulation, floor, wall and ceiling cladding,
- glass façades, façade cladding,
- sound insulation, fire protection, corrosion protection,
- surfaces.

The above topics regarding secondary constructions concern the following in particular:

- vertical and horizontal building components in the ground
- over-ground wall and ceiling constructions and their openings
- flat and inclined roof constructions and their openings.

MB 9.2 Structural Design:

- The teaching of methods for evaluating the development of structural designs
- Analysis of the interactions between the construction methods, materials and supporting systems
- Designing structural designs (goals, methods).

Explanatory keywords:

- Framing, bars, arches, frames, foundations, reinforcements
- Skeleton and solid constructions, shell structures.

MB 9.3: Integrated Tutorial Building Construction and Structural Design:
The learning contents of both subjects should be applied in an integrated tutorial.

Teaching format

MB 9.1 Building Construction II.2: 30 hours of lectures 15 hours of tutorials and 45 hours for the independent study prior to and following 4 tutorials (of which two sit-down tutorials) and examination preparation.

MB 9.2 Structural Design: 30 hours of lectures 15 hours of tutorials and 45 hours for the independent study prior to and following 4 tutorials.

MB 9.3 Integrated Tutorial Building Construction II and Structural Design: 30 hours of seminar-based work in both areas of teaching in the form of a common semester tutorial and 30 hours of independent study.

Requirements for attending course

MB 9.1 and MB 9.3: Successful completion of module MB 6 – Building Construction I and Material Sciences, and successful participation in the module tutorials of module MB 8.1 Building Construction II.1.

MB 9.2: Approval to sit the examination for module MB 7

Examination format

MB 9.1 Building Construction II.2:
Tutorials:
Participation in all of the tutorials in module MB 9.1
Examination after the 4th semester.

The tutorials in module MB 9.1 Building Construction II.2 are not graded. 75% of the tutorials must at least be "recognised", however.

Requirement for taking the examination for module element MB 9.1:
Successful parallel participation in the teaching in modules MB 9.1 and MB 9.3 and preparation of the common tutorial, and successful participation in the final colloquium (minimum grade 4.0) of module MB 9.3.

MB 9.2 Structural Design:
Successful participation (minimum grade 4.0) in 75% of the 4 tutorials.

MB 9.3 Common Tutorial Building Construction II and Structural Design:
Successful completion of the exercise in the 4th semester and successful participation in the final colloquium (minimum grade of 4.0).

Requirement for the awarding of credit points

MB 9.1 Building Construction II.2:
The grade in module MB 9.1 is only determined by the grade attained in the examination after the 4th semester.
The students sit the examination at the start of the non-teaching time; the examination can be retaken before the start of the following semester.
MB 9.2 Structural Design:
The grade is determined as the arithmetical mean of all module assignments completed in the 4th semester.

MB 9.3 Integrated Tutorial Building Construction and Structural Design:
Successful participation in the final colloquium for the common tutorial with a minimum assessment of 4.0.

The grade for the module consists 3/8 of the grade for module MB 9.1 Building Construction II.2 and 3/8 of the grade for module MB 9.2 Structural Design and 2/8 of the grade for the final colloquium for module MB 9.3 "integrated tutorial".

Weighting of the grade for the final grade: 8/180 (4.44%)

Module leader(s) and principal tutor(s)

Prof. Dipl.-eng. Thomas Dibelius, Prof. Dr.-eng. Thorsten Weimar, Prof. Dipl.-eng. Sibille Wirtz

Additional information:

MB 10 Building Physics II / Building Technology I

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	180 h	3 CP 3 CP	4th sem. 4th sem.	Summer semester Summer semester	1 semester

Teaching	Contact time	Home study	Planned size of group
MB 10.1: 4th sem. Lecture Tutorial 4th sem. MB 10.2: 4th sem. Lecture Tutorial 2 SWP 4th sem.	2 SPW / 30 h 1 SPW / 15 h 2 SPW / 30 h 1 SPW / 15 h	45 h 45 h	Lecture: whole semester; Tutorials: up to 20

Learning outcomes / competencies

MB 10.1 Building Physics II:
The goal is to be able to apply what has been learned regarding the designing and planning of building components and buildings accordingly and to therefore contribute to economical and energy-efficient building methods without structural damage.

MB 10.2 Building Technology I:
The goal of this module is to teach basic knowledge regarding technical infrastructure systems, the planning methods and their technical implementation in the building. In this context, the relationship between quality, usability, the building costs and energy consumption of a building, as well as the standards of assessment and evaluation for the technical infrastructure systems and their use in the overall context of the building planning are conveyed.

Contents

MB 10.1 Building Physics II:
In the second section of the Building Physics II course, the requirements surrounding the insulation of buildings against humidity and sound are focused on, and the certification and assessment procedures are explained.
The lectures and tutorials include:

- The transport mechanisms of water
- Sealing for the roof, the façade and to protect against the soil
- Water vapour diffusion and condensation
- Materials and structures for the protection against moisture
- Principles and terminology regarding sound insulation
- Principles and terminology regarding room acoustics
- Air and footfall insulation in building construction
- Exterior noise and urban sound insulation

MB 10.2 Building Technology I:
The lecture provides an overview of the different topics in the field of the technical building services and configuration and their systems.

- Basics of technical supply and disposal, shafts and paths
- Water, waste water, technical sanitation systems
- Supply and heating of drinking water
- Production and distribution of hot and cold air, technical heating and cooling systems

Key competencies:

- Raising the awareness for climate-friendly and sustainable planning and building
- Basic skills in the design of efficient technical building supply and disposal concepts.

Teaching format

MB 10.1: 30 hours of lectures, 15 hours of tutorials and 45 hours for independent study and examination preparation.

MB 10.2: 30 hours of lectures, 15 hours of tutorials and 45 hours for independent study.

Requirements for attending course: None

Examination format

MB 10.1: Successful completion of all tutorials throughout the semester and participation in the examination (duration of the examination: 90 min.).

MB 10.2: Successful completion of all tutorials during the semester.

Requirement for the awarding of credit points

Completion of the individual module assignments MB 10.1 and MB 10.2,
each with a grade of at least 4.0. MB 10.1: examination grade of at least
4.0.
The students sit the examination at the start of the non-teaching time; the examination can be retaken before the start of the following semester.

MB 10.2: Arithmetical mean from the tutorials.

The grades for the individual modules are incorporated into the overall grade for the module on a half and half basis.

Weighting of the grade for the final grade: 6/180 (3.33 %)

Module leader(s) and principal tutor(s)

Prof. Dr.-eng. Lamia Messari-Becker

Additional information:

MB 11 Building Theory

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	150 h	2 CP 2 CP 1 CP	3rd sem. 4th sem. 4th sem.	Winter semester Summer semester	2 semesters

Teaching	Contact time	Home study	Planned size of group whole semester
MB 11.1: 3rd sem. Lecture MB 11.2: 4th sem. Lecture MB 11.3: Excursions	2 SPW / 30 h 2 SPW / 30 h	30 h 30 h 30 h	

Learning outcomes / competencies

MB 11.1 and MB 11.2: The goal of this module is teaching basic theoretical knowledge in the partial areas of home building.
Knowledge of building typologies.
Critical assessment of different typologies for certain construction tasks and their direct application.

MB 11.3: Excursions serve the purpose of the object-related deepening and visualisation of economic knowledge and practical experiences.

Contents

MB 11.1, 3rd sem. and MB 11.2, 4th sem.:
The lecture on the Basics of Building Theory conveys the knowledge of building theory design methods that are of relevance to the design-related development as well as the social backgrounds and historic developments.
The lectures focus on the typology, functional sequences, "regulations", cost efficiency and the conceptual methodology of design-related tasks such as:

- Public buildings (education, health, administration, culture and sport)
- General administrative and office buildings
- Commercial and industrial buildings
- Commercial buildings
- Home building with in-depth focal points, such as:

- Site development systems and urban development structures
- Home typology and location
- Home- and spatial developments
- Functionality, spatial quality and zoning
- Exterior space surrounding homes

MB 11.3 Excursions: One or multi-day excursions to and/or in foreign destinations on the specialist individual questions of architecture and/or subject-spanning projects and topics regarding architecture and urban development.

Teaching format

MB 11.1, 3rd sem.: 30 hours of lectures, 30 hours of independent study
MB 11.2, 4th sem.: 30 hours of lectures, 30 hours of independent study and examination preparation
MB 11.3, 4th sem.: 3-day obligatory excursion and/or 3 all-day obligatory excursions

Requirements for attending course: None

Examination format

MB 11.1 and MB 11.2: An examination after the 4th semester (max. 60 min.)
The examination takes place at the start of the non-teaching time, the examination can be retaken before the start of the following semester.

MB 11.3: The part module is successfully completed of proof has been provided of participation in the excursions.

Requirement for the awarding of credit points

MB 11.1 and MB 11.2: Successful completion of an examination following the 4th semester with a grade of at least 4.0 (4 CP) = overall grade of the module.
MB 11.3: Proof of participation without grading (1 CP)

Weighting of the grade for the final grade: 5/180 (2.77 %)

Module leader(s) and principal tutor(s)

Prof. Dipl.-eng. Sibylle Käppel-Klieber, all of the Design tutors in the department.

Additional information:

MB 12 Spatial Design

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	330 h	3 CP 8 CP	2nd sem. 3rd sem.	Summer semester Winter semester	2 semesters

Teaching	Contact time	Home study	Planned size of group
MB 12.1: 2nd sem. Lecture Tutorial MB 12.2: 3rd sem. IP lecture with specialisation	2 SPW / 30 h 1 SPW / 15 h 2 SPW / 30 h 2 SPW / 30 h	45 h 180 h	L.: whole sem. T: up to 20 IP: up to 15

Learning outcomes / competencies

MB 12.1: Principles of Spatial Design:
- Raising awareness for the wide range of spatial design with its different problems and possible solutions.
- Development of a designing process before the background of the spatial situation in the local environment.
- Application of different forms of presentation and representation for the conveying of the design-related idea in the form of lectures and tutorials.

MB 12.2: Integrated Project focusing on spatial design:
Regarding the considerable professional requirements, in addition to the technical knowledge, teaching should be provided in qualifications oriented to the professional field (key competencies). The provision of these competencies in the area of spatial design encompasses: rhetoric, communication and presentation and methodical expertise, e.g. acquiring, structuring, using, storing and reusing information and presenting it, interpreting the results of processes and presenting them in the suitable form.

Design and presentation techniques should be learned from those participating in the design work in the Integrated Project so that all of the levels pertaining to the conveying of spatial designs can be projected from an aesthetic and pragmatic point of view.

The goal is to focus the social relevance in issues regarding spatial development.

Contents

MB 12.1: Principles of Spatial Design:
The theoretical principles of spatial designs and design principles should be explained using examples in lectures and seminars and strengthened in accompanying tutorials.
The basic knowledge for the preparation of design task is conveyed with the following criteria: dimensions, constructions, proportions, volume, light, colour and material composition, economics, ecology, etc.

These requirements are primarily addressed in the following lectures:
- Introduction to spatial design
- Spatial perception
- Atmosphere in spatial areas
- Sensory perception of spatial areas
- Creation of spatial effects
- Spatial compositions

- Dimension construction proportion
- Furniture
- Typology of living arrangements
- The architectural space
- Spatial designs
- Spatial phenomena

MB 12.2 Integrated Project focusing on spatial design:
The development of atmospheres in the space using light, colour, material and acoustics and their interplay should be examined on an interdisciplinary basis before the backdrop of a practicable evaluation. In this context, functional allocations and construction-related requirements are also conveyed using specific tasks (for example: rooms for the knowledge society), such as the room- and atmosphere-forming attributes of a coordinated colour and material design.
The integrative moments, such as the construction-related knowledge and comprehensive material attributes, are supported in a continuous dialogue with the design-related work in order to convey the overall context of a task appropriately.

Teaching format
MB 12.1, 2nd sem.: 30 hours of lectures, 15 hours of tutorials and 45 hours for independent study

MB 12.2, 3rd sem.: 30 hours of lectures, 30 hours integrated design project and 180 hours project preparation. In the scope of the completion of the project, a focused project week takes place. Participating in the project week is compulsory.

Requirements for attending course

MB 12.1: Spatial Design: none

MB 12.2: Integrated Project focusing on spatial design: 70% of the design / spatial design principles (tutorials) in the 2nd semester (MB 12.1) have to be completed with a grade of at least 4.0.

Examination format

The grade for the module consists of 20 % of the individual grades for the tutorial work in MB 12.1 and 80 % of the grade for the spatial design project in MB 12.2 including the presentation.

Requirement for the awarding of credit points

Completion of the semester assignments, each with a grade of at least 4.0.

Weighting of the grade for the final grade: 11/180 (6.11%)

Module leader(s) and principal tutor(s)

Prof. Dipl.-eng. Ulrich Exner

Literature:

Franz Xaver Baier
"Raum"
Francesco Coletti
"Architekturtheoretische Notizen"
Nicola di Battista
"Perspektiven zu einer Architektur von heute"
Gaston Bachelard
"Poetik des Raumes"
Jürgen Spitz
Lichterzeugung auf kleinstem Raum. Theorie und Praxis der LED-Anwendungen
Richard Weston
Material, Form, Architecture
Dietmar Rübel / Monika Wagner / Vera Wolff
"Materialästhetik"
"Quellentexte zu Kunst, Design und Architektur"

MB 13 Urban Development

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	420 h	3 CP 11 CP	3rd sem. 4th sem.	Winter semester Summer semester	2 semesters

Teaching	Contact time	Home study	Planned size of group
MB 13.1: 3rd sem. Lecture	2 SPW / 30 h	45 h	L.: whole sem.
Tutorial	1 SPW / 15 h		T: up to 20
MB 13.2: 4th sem. Lecture	2 SPW / 30 h		
Integrated Project	3 SPW / 45 h	255 h	IP: up to 15

Learning outcomes / competencies

- Understanding the different spatial structures regarding morphology, function and meaning
- Use of suitable methods of analysis for urban areas for checking one's own design-related approach
- Relationship between urban development typologies and building typologies (especially living typologies) and open space typologies
- The creation of space in urban developments (building structure and open space)
- Methods of urban development design (structural design, framework plan, urban development concept, detail)
- Use of different presentational techniques and scale levels (pictogram, plan drawing and model)
- Gaining experience with the presentation of the design.

Key competencies:

- Presentation of the results
- Practising practically-oriented group work / the ability to work on a cooperative basis in the group
- Resolution of conflicts and structuring of the work process.

Contents

MB 13.1 Principles of Urban Development:
In the 3rd semester, a thematic approximation to the urban area and open space takes place. In the lectures and tutorials, the following topics are dealt with in particular:

- Spatial structures and urban morphology
- The creation of space in urban developments: building structure and open space
- Urban development typologies: block, courtyard, row, terrace, stand-alone
- Open space typologies: private and public open space
- The link between urban typologies and building typologies (especially living typologies)
- Models of urban development
- Urban development concepts and designs
- Key terms relating to the structure of the social space in the city, particularly public and private space
- Methods of analysis and evaluation
- Transport infrastructure systems and basic elements of urban utilities
- Key terms and key data relating to urban development.

In the tutorials, working on their own, the students are initially introduced to different building development structures (e.g. open and closed, oriented and open-air), and the relationship between building developments and open space is addressed.

MB 13.2 Integrated Project 2, focusing on urban development:
In the 4th semester, in-depth knowledge on urban development and open space planning is conveyed in the lectures as well as the specialist content in the design project.
In the design project, an urban development concept according to design-related, functional and design points of view is completed in a group project (analysis, presentation of a model, framework concept, urban development concept). The work on the urban development design project is structured in the scope of a project week and is accompanied by regular supervision and colloquiums.
Additional possibilities for in-depth study can take place in the elective modules, e.g. on the topics of urban design, open space planning or the sociology of living.

Teaching format

MB 13.1: 3rd sem.: 30 hours of lectures, 15 hours of tutorials and 45 hours for independent study and elaboration of the 4-5 tutorials.

MB 13.2: 4th sem.: 30 hours of lectures, 45 hours of tutorials and discussion of the project work and 255 hours for independent study and elaboration of the Integrated Project.

In the scope of the completion of the project, a focused project week takes place. Participating in the project week is compulsory.

Requirements for attending course

MB 13.1: Principles of Urban Development: none

MB 13.2: Integrated Project focusing on urban development: completion of module MB 13.1.

Examination format

The tutorials in the 3rd semester (MB 13.1) have to be completed in terms of the arithmetical mean result with a grade of at least 4.0 (sufficient).
The module grade consists of 20 % of the grade from the MB 13.1 tutorials in the 3rd semester and 80 % of the grade for Integrated Project 2 focusing on urban development, including the presentation.

Requirement for the awarding of credit points

Completion of the semester assignments with a grade of at least 4.0 (sufficient).

Weighting of the grade for the final grade: 14/180 (7.77%)

Module leader(s) and principal tutor(s)

Prof. Dr.-eng. Hilde Schröteler-von Brandt

Additional information:

MB 14 "Construction and Technology" – Building Construction III / Building Technology II

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	420 h	11 CP 3 CP	5th sem. 5th sem.	Winter semester Winter semester	1 semester

Teaching	Contact time	Home study	Planned size of group
MB 14.1: 5th sem. Lecture Building Construction III	2 SPW / 30 h		L.: whole sem.
IP 3 – "Construction and Technology"	3 SPW / 45 h	255 h	T: up to 20 IP: up to
MB 14.2: 5th sem. Lecture	2 SPW / 30 h		15
Tutorial 5th sem.	1 SPW / 15 h	45 h	

Learning outcomes / competencies

MB 14.1 Building Construction III:
Building on the knowledge of the relationships between primary and secondary structures, the Building Construction III module focuses on the complimentary structures of a building. In addition to gaining a broad detailed and specialist product knowledge, the goal of the teaching is to recognise the sophisticated design and construction-related relationships and/or dependencies between the complementary building components and structures of a building on the one hand and the considerations and decisions regarding the primary and secondary structures on the other.

In the scope of **Integrated Project 3** – "Construction and Technology", the specific independent application of the knowledge of construction learned so far should be practised and applied on a structured basis using an independently and methodically prepared overall design as the basis for integrated architectural planning and work.

The students should be enabled to place the basic knowledge and experience that they have gained surrounding the supplementary complementary constructions in an overall context and to implement the subsequent results of the analysis and reflection within the planning of the design, the implementation and the details on a comprehensive architectural basis.

Key competencies:

- Presentation of the results
- Practising practically-oriented group work / the ability to work on a cooperative basis in the group
- Resolution of conflicts and structuring of the work process.

MB 14.2 Building Technology II
The goal of this module is to convey basic knowledge regarding technical infrastructure systems, the planning methods and their technical implementation in the building. In this respect, the relationship between quality, usability, the building costs and energy consumption of a building, as well as the standards of assessment and evaluation for the technical infrastructure systems and their use in the overall context of the building planning are taught.

Contents

MB 14.1 Building Construction III - Complimentary Constructions:
In direct context with and partially parallel with the primary and secondary structures, the basic construction-related knowledge concerning the complimentary constructions of a building,

especially the following building components which can be seen to relate directly to the building shell are conveyed and presented attractively using built examples with regard to their design leeway.

- Windows + glass façades (wood, aluminium, plastic) and the associated fittings,
- Balconies, verandas, porticoes.

Complimentary constructions in the interior structure of a building are considered in detail and strengthened using design approaches from the Integrated Project through to the planned details of the design and the construction:

- Staircases (concrete, wood, steel), ramps, lifts
- Parapets and balustrades
- Doors
- Lightweight constructions, interior wall systems.

Integrated Project 3 – "Construction and Technology":
The Integrated Project III consists of a design which is issued and managed on an organisational basis by the responsible tutor for the subject of Building Construction, and, as required, in coordination with additional Professors. The seminar supervision takes place in groups and/or with individual supervision, and is supplemented with up to two intermediate colloquiums.

The project work focuses on the conceptual preparation of a detailed design task.
The additional conveying of specialist project-related contents takes place in the scope of individual and/or group sessions and the seminar-based supervision of the design.

MB 14.2 Building Technology II
Linking up to module MB 10.2, Building Technology I, the lecture provides an overview of the additional topics and associated systems relating to building technology:

- Electrical and communications systems, lighting
- Conveying systems, lifts and escalators
- Technical ventilation systems.

Teaching format

MB 14.1: 30 hours of lectures, Building Construction III
45 hours of seminar-based project including building construction aspects within Integrated Project 3 "Construction and Technology" and 255 hours of individual project work. In the scope of the completion of the project, a focused project week takes place which ends with an intermediate colloquium. Participating in the project week is compulsory.

MB 14.2: 30 hours of lectures, 15 hours of tutorials + 45 hours for independent study and examination preparation.

Requirements for attending course

MB 14.1: Admission to the examination for module MB 9.1 Building Construction II and successful participation in the shared tutorial for Building Construction and Structural Design of module MB 9.3 (at least 4.0).

MB 14.2: successful participation in MB 10.2

Examination format

The grade for the module consists 11/14 of the grade for the integrated design project 3 – "Construction and Technology" MB 14.1, including the successful intermediate colloquiums (recognised/not recognised) and the successful end colloquium (grade of at least 4.0) as well as 3/14 from the grade for module MB 14.2 Building Technology II (successful completion of all tutorials during the semester and a 90 min. examination).
The students sit the examination at the start of the non-teaching time; the examination can be retaken before the start of the following semester.

Requirement for the awarding of credit points

Completion of the semester assignments, each with a grade of at least 4.0.

Weighting of the grade for the final grade: 14/180 (7.77%)

Module leader(s) and principal tutor(s)

Prof. Dipl.-eng. Thomas Dibelius, Prof. Dipl.-eng. Sibille Wirtz, Prof. Dr.-eng. Lamia Messari-Becker

Additional information:

MB 15 Improvisational Design_Excursions

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	210 h	6 CP (3x 2 CP) 1 CP	6th semester	Summer semester	1 semester

Teaching	Contact time	Home study	Planned size of group
MB 15.1: Completion and presentation of 3 improvisational designs MB 15.2: Duration 3 excursion days (all day)		180 h 30 h	up to 25

Learning outcomes / competencies

MB 15.1: In a time-limited period, the students should hone their abilities regarding design, construction, etc. with their design drawings, and show and present their design-related intentions.

MB 15.2: Excursions serve the purpose of the object-related deepening and visualisation of economic knowledge and practical experiences.

Contents:

MB 15.1 Improvisational Design: An improvisational design consists of a design task to be completed in a short time frame which is not generally supervised.

15.2 Excursions One or multi-day excursions to and/or in foreign destinations on the specialist individual questions of architecture and/or subject-spanning projects and topics regarding architecture and urban development.

Teaching format

MB 15.1 Improvisational Design: 3 independently completed improvisational designs, possibly in the form of Design Workshops (60 hour workload each).

MB 15.2: Excursion: 3-day obligatory excursion and/or 3 all-day obligatory excursions (can possibly be combined with MB 11.3 with longer excursions).

Requirements for attending course

None

Examination format

MB 15.1: Presentation of the improvisational designs.

MB 15.2: The part module is successfully completed if proof has been provided of participation in the excursions.

Requirement for the awarding of credit points

MB 15.1: Completion including presentation, each with a grade of at least 4.0 (overall grade for module: arithmetical mean from the improvisational designs).

MB 15.2: Proof of participation without grading (1 CP)
Weighting of the grade for the final grade: 7/180 (3.88%)
Module leader(s) and principal tutor(s) All teaching staff in the Department of Architecture
Additional information: ---

MB 16 Construction Economics / Building and Planning Law

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	180 h	2 CP 4 CP	5th sem. 5th sem.	Winter semester	1 semester

Teaching	Contact time	Home study	Planned size of group
MB 16.1: 5th sem. Lecture MB 16.2.1: 5th sem. Lect. MB 16.2.2: 5th sem. Lect.	3 SPW / 45 h 2 SPW / 30 h 1 SPW / 15 h	15 h 60 h 15 h	Lectures: whole semester; Tutorials: up to 20

Learning outcomes / competencies

MB 16.1, 5th sem. Construction Economics I
In addition to conveying the basic specialist knowledge, the students should be conveyed the complexity of the construction process in the planning and realisation phase and provided with the basic knowledge for the legal and process-related completion of construction projects and their cost configuration.

In addition to the specialist contents, the students should be provided with leadership and management competencies.

MB 16.2 Building and Planning Law:

MB 16.2.1 Building Law:
All questions are discussed on the basis of practically oriented issues and specific cases so that the students can learn about the immediate meaning of the different problems at the practical level.

MB 16.2.2 Planning Law:
Basic knowledge of the planning system in Germany, especially municipal planning, and basic knowledge of the areas of application in architectural practice.

Contents

MB 16.1 Construction Economics:
This module conveys the factors of the planning and completion of the building which relate to the construction economics and the organisation.

Construction Economics and the completion of the building:

- Project phases, planning process and project participants
- Definitions of quality and quantity surveying
- Determination, controlling and steering of costs according to DIN 276
- Planning and controlling of schedules
- Tendering, service description methods
- Awarding of tenders, submission process, construction contracts
- Site surveillance (works management)
- Calculation and evaluation of follow-up work

Issues pertaining to construction economics are not seen as being contradictory to the design questions, but as the necessary basis for the successful planning and construction work. Integrated tutorials consisting of practically-oriented tutorial work in the area of tendering,

cost- and schedule-planning complement the lectures.

MB 16.2.1 Building Law:

Contractor agreements: contracts pertaining to the German Regulations for Construction Work (VOB) and the German Civil Code (BGB) according to the content and type of agreement, particularly problems regarding the acceptance, warranty, notification of misgivings and the proper conduct of the settlement.
Architectural contracts according to the contents and form of contractual agreements (performance phases, difficulty level, etc.), questions of liability.

MB 16.2.2 Planning Law:

The basic planning law terms of relevance for architects are conveyed, particularly at the urban development planning and municipal levels. In addition to an introduction to the development of the German federal planning system, the land-use plan is presented in terms of its impact on basic decisions under planning law. The setting up of a development plan, its binding impact, the key forms of presentation and the basic principles of the German Land Use Ordinance (BauN-VO) are conveyed. In addition, the further contents that are relevant to planning law are discussed, such as the project-related development plan, the urban development contract and parts 34 and 35 of the German Building Code. In addition to the basic legal knowledge, examples of use at the practical level are also presented.

Teaching format

MB 16.1, 5th sem.: 45 hours of lectures, 15 hours of independent study and examination preparation.
MB 16.2.1, 5th sem.: 30 hours of lectures / seminar, 60 hours of independent study and examination preparation.
MB 16.2.2, 5th sem.: 15 hours of lectures / seminar, 15 hours of independent study and examination preparation.

Requirements for attending course: None

Examination format

MB 16.1: Examination in 16.1 (max. 60 min.)
MB 16.2: Examinations in MB 16.2.1 (max. 120 min.) and MB 16.2.2 (max. 60 min.)

Requirement for the awarding of credit points

The grades from the examinations in modules MB 16.1, MB 16.2.1 and MB 16.2.2 are incorporated in the grade for the module according to the proportion of credit points for each module at a ratio of 2:3:1.
The students sit the exams at the start of the non-teaching time at the end of the semester; the exams can be retaken before the start of the following semester.

Weighting of the grade for the final grade: 6/180 (3.33 %)

Module leader(s) and principal tutor(s)

Prof. Dr.-eng. Bert Bielefeld, Prof. (Hon.) Dr.-jur. Falk Würfele, Prof. Dr.-eng. Hilde Schröteler-von Brandt

Additional information:

MB 17 Construction Economics II

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	150 h	5 CP	6th sem.	Summer semester	1 semester

Teaching	Contact time	Home study	Planned size of group
MB 17.1: 6th sem. Lecture Tutorial	2 SPW / 30 h 1 SPW / 15 h	105 h	L.: whole sem. T: up to 20

Learning outcomes / competencies

MB 17.1 Construction Economics II:
In addition to conveying the basic specialist knowledge, the students should be conveyed the complexity of the profession of architect and its tasks in the planning and realisation phases. In addition to the specialist contents, the students should be provided with leadership and management competencies. A key part of this is an understanding of the professional profile as well as its sphere of responsibility and action in order to prepare the students for professional life.

Contents

MB 17.1 Construction Economics II:
This module conveys the professional framework conditions pertaining to architects and the framework conditions for the project completion.

Professional framework conditions:

- Professional practice of the architect, professional associations
- Foundation of an architectural office
- Order procurement and competition law
- Payment of planning services according to HOAI
- Principles of project development and project steering
- Principles of facility management

On the basis of a study project from the previous studies, the contents conveyed in module MB 16 are managed on a practically-oriented basis in a tutorial. The tutorial covers parts of the cost calculation, schedule planning and tendering. In the tutorial a reflection on the individual design is made on the basis of the economic (building costs) and organisational aspects (construction process).

Teaching format

MB 17.1: 30 hours of lectures, 15 hours of tutorials, 1 supervised tutorial (study project), 105 hours of independent study and examination preparation

Requirements for attending course

None

Examination format

Submission of the tutorial project in the 6th semester and examination (60 min.).

Requirement for the awarding of credit points

Completion of the semester assignments and the examination with a grade of at least 4.0.
The grade for the examination and the grade for the tutorial are incorporated in the overall grade 3/5 and 2/5.

The examination takes place during the teaching time in the summer semester, the examination can be retaken before the start of the following semester.

Weighting of the grade for the final grade: 5/180 (2.77 %)

Module leader(s) and principal tutor(s)

Prof. Dr.-eng. Bert Bielefeld

Additional information:

MB 18 Compulsory elective module I (W I)

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	3 x 90 h each	3 x 3 CP each = ∑ 9 CP	1st sem. 2nd sem.	Winter semester Summer semester	1 semester

Teaching	Contact time	Home study	Planned size of group
Lecture/Tutorial/Seminar each with 2 SPW	in each case 2 SPW / 30 h	60 in each case	up to 25

Learning outcomes / competencies

In-depth study of special topics in different areas of learning.
Up to two elective modules max. 6 CP (within W I, W II and WIII) can be completed in other departments at the University of Siegen or at KoSi (see offers of LSF).

Contents

MB 18.1: Special Areas of Representation: e.g. Construction Drawing, Representational Geometry:
Conveying of drawing and presentational techniques, transfer of what has been seen into two dimensional representations. Conveying of the basic principles for architectural design.

MB 18.2: Principles of Technology:
Introduction to the topics of building technology, conveying of the relationships between supply and disposal and ecological factors.

MB 18.3: Special Areas of Building Theory: e.g. People and Space:
Analytical examinations on the basis of built examples, study of the theoretical approaches of interdisciplinary collaboration within faculty II.

MB 18.4: Special Areas of Model Making:
Analysis of design-related ideas and development of strategies for implementation in a genuine scale-related realistic model.
Analytical addressing of familiar and unfamiliar model making materials. Developing a variety of different representational and production techniques on an experimental basis.

MB 18.5: Open Space Planning:
Creation of the context and relationship between the open space planning and the development and usage requirements.
Conveying of planning principles and methods for open space and landscape planning;
conveying of in-depth knowledge on presentation techniques and possibilities.

MB 18.6: Special Areas of Building History: Architects:
Creation of in-depth understanding of the relationships between the personal creativity and the overall social, artistic and political conditions. Consideration and analysis of the lives and works of leading individual architects.

Teaching format The elective modules are single semester courses and are offered in the summer or winter semester. All of the elective modules are exclusively course-assessed (this means papers, seminar papers, designs, constructions and IT tutorials, lab work and calculations).
Requirements for attending course: None
Examination format Written or oral examination of the course-assessed assignments, as well as presentations, written projects or graded tutorials.
Requirement for the awarding of credit points Completion of the semester assignments, each with a grade of at least 4.0.
Weighting of the grade for the final grade: 9/180 (5 %)
Module leader(s) and principal tutor(s) All teaching staff of the University of Siegen (according to the offer of elective modules)
Additional information: **---**

MB 19 Compulsory elective module II (W II)

	Workload	Credit points	Study semester	Frequency of the offer	Duration
	2 x 90 CP each	2 x 3 CP each = ∑ 6 CP	from 3rd sem.	Winter semester Summer semester	1 semester

Teaching	Contact time	Home study	Planned size of group
Lecture/Tutorial 2 SPW each	in each case 2 SPW / 30 h	60 h each	25 people

Learning outcomes / competencies

In-depth study of special topics in different areas of learning.
Up to two elective modules max. 6 CP (within W I, W II and WIII) can be completed in other departments at the University of Siegen or at KoSi (see offers of LSF), and up to three elective modules with a max. 9 CP (within W II and WIII) can be completed as an internship in Germany or a foreign country. For more details, please refer to the *Praktikumsordnung* [Internship Ordinance].

Contents

MB 19.1: Special Areas of Spatial Design:
In-depth study of specialist tasks in spatial design which require additional knowledge due to unusual tasks (e.g.: sacred/religious places).

MB 19.2: Special Areas of Representation: e.g. Architectural Visualisation:
Sophisticated virtual three dimensional geometries are put into a graphic and visually understandable format, and their possible uses are presented.

MB 19.3:

MB 19.3.1 Historical Buildings Research
Historical Buildings Research teaches methods for studying the construction-related history of individual buildings. The time frame for studying the building in questions ranges from its origins to the present day.

MB 19.3.2 Preservation of Monuments
In the Preservation of Monuments, the old/ancient building is considered as a whole in order to perceive, recreate and develop its identity. In this respect, the theoretical principles of the preservation of monuments are presented from the point of view of the architect and the craftsmanship-based, technical, legal and planning principles of historic buildings preservation are explained.

MB 19.3.3 Building Documentation
Building Documentation relates to the recording of spatial structures in two dimensional scale drawings. In this respect, a comprehensive introduction to the methods and techniques of the different measuring processes is conveyed.

MB 19.4: Special Areas of Building History:
Consideration and analysis of the lives and works of leading individual architects.

MB 19.5: History of Art:
In the subject of History of Art, the access to architecture occurs in a further aesthetic context. This takes place in view of the specific methods and instruments of the analysis of the work and in

terms of the definition of architecture as a special artistic genre in relation to the other arts. This takes place in addressing selected theories of history of art. The goal of this course is to show the students the possibilities of self-definition in the aesthetic discourse.

MB 19.6: Philosophy of Architecture:
In the subject of the Philosophy of Architecture, the basic terms relating to architecture such as room, body, material, purpose, beauty etc. are applied from the field of philosophy. The goal is to prepare abstract possibilities of thought relating to the constituent parts of architecture from which solutions for specific problems in the field of architecture can be derived. With this course, taking specific examples from the world of architecture, the students are taught a repertoire of argumentation structures and theories which they are not only able to use for the theoretical presentation of their work, but also help them to classify their specific aesthetic actions in a general context of knowledge from which they subsequently gain impulses for their individual thinking in turn.

MB 19.7: Special areas of Building Physics:
Fire safety, special areas of sound proofing.

MB 19.8: Special areas of Building

Construction: MB 19.9: Internship
For the application of the theory that the student has learnt in the architectural office. Max. 9 CP in WII and WIII.

Teaching format

The elective modules are single semester courses and are offered in the summer or winter semester. All of the elective modules are exclusively course-assessed (this means papers, seminar papers, designs, constructions and IT tutorials, lab work and calculations). In the case of internships, internship reports are to be submitted to the Internship Office. For more details, please refer to the *Praktikumsordnung* [Internship Ordinance].

Requirements for attending course

MB 19.1: successful completion of MB 12

MB 19.2: successful completion of MB 4

MB 19.3-19.6: None

MB 19.7: successful completion of MB 8.2 and MB 10.1

MB 19.8: successful completion of MB 6 and MB 8.1

Examination format

Written or oral examination of the course-assessed assignments, as well as presentations, written projects or graded tutorials.

Requirement for the awarding of credit points

Completion of the semester assignments (partial module grades) with a grade of at least 4.0.

Weighting of the grade for the final grade: 6/180 (3.33 %)
Module leader(s) and principal tutor(s) All teaching staff of the University of Siegen (according to the offer of elective modules).
Additional information: **---**

MB 20 Compulsory elective module III (W III)

	Workload	Credit points	Study semester	Frequency of the offer	Duration
	5 x 90 CP each	5 x 3 CP each = ∑ 15 CP	from the 5th sem.	Winter semester Summer semester	1 semester

Teaching	Contact time	Home study	Planned size of group
Lecture/Tutorial 2 SPW each	in each case 2 SPW / 30 h	60 in each case	up to 25

Learning outcomes / competencies

In-depth study of special topics in different areas of learning.
Up to two elective modules max. 6 CP (within W I, W II and WIII) can be completed in other departments at the University of Siegen or at KoSi (see offers of LSF), and up to three elective modules with a max. 9 CP (within W II and WIII) can be completed as an internship in Germany or a foreign country. For more details, please refer to the *Praktikumsordnung* [Internship Ordinance].

Contents

MB 20.1.1: Special aspects of Construction Economics
MB 20.1.2: Special aspects of Building Law
MB 20.1.3: Construction Management
MB 20.1.4: Special aspects of Construction Law
The following topics are offered on an alternating basis: Construction management, construction costs, schedule planning, follow-up management, international planning and building, tendering.

MB 20.2 Special aspects of Structural Design
Design of structural designs and their integration in the overall design, building with new materials.

MB 20.3 Special aspects of Urban Development: e.g. Urban Design:
Conveying of basic knowledge and design capability for all of the scale levels in the area of urban design.

MB 20.4 Special aspects of Urban Development: e.g. Regional Building:
Highlighting backgrounds for the creation of regional forms of building and settlement, the analysis and evaluation of regional forms of building and settlement; the use of the analysis results for urban development concepts.

MB 20.5 Special aspects of Urban Development: e.g. Sociology of Living and the City:
Introduction to the sociology of living (living requirements, development of living patterns, lifestyles, etc.), the city as a social realm and the basic determining factors of social living patterns, sociological terms relating to the urban environment, structural changes in urban areas and social polarisation (segregation, gentrification, housing markets etc.), the methods and application of findings relating to the social realm and the accompanying tutorial exercises.

MB 20.6 Special aspects of Urban Development/Building Theory: Architecture in Poorly Served Areas – Database:
Highlighting backgrounds regarding buildings in poorly served areas, application of suitable methods of analysis and assessment for architectural and urban structures, academic and media-based preparation of contents.

MB 20.7 Special aspects of Building Technology:
Topics such as lighting, energy, etc. are addressed.

MB 20.8 Special aspects of Building Construction:
For example, historic building constructions, special constructions, new materials.

MB 20.9 Building Ecology:

MB 20.10 Internship:
For the application of the theory that the student has learnt in the architectural office. Max. 9 CP in WII and WIII.

Teaching format

The elective modules are single semester courses and are offered in the summer or winter semester. All of the elective modules are exclusively course-assessed (this means papers, seminar papers, designs, constructions and IT tutorials, lab work and calculations). In the case of internships, internship reports are to be submitted to the Internship Office. For more details, please refer to the *Praktikumsordnung* [Internship Ordinance].

Requirements for attending course

MB 20.1.1-20.1.4: parallel participation in MB 16 and MB 17
MB 20.2: successful completion of MB 7 and MB 9.2
MB 20.3-20.6: successful completion of MB 13
MB 20.7: successful completion of MB 10.2 MB 14.2
MB 20.8: successful completion of MB 6, MB 8.1, MB 9.1 and MB 14.1
MB 20.9-MB 20.10: None

Examination format

Written or oral examination of the course-assessed assignments, as well as presentations, written projects or graded tutorials.

Requirement for the awarding of credit points

Completion of the semester assignments in each module with a grade of at least 4.0.

Weighting of the grade for the final grade: 15/180 (8.33 %)

Module leader(s) and principal tutor(s)

All teaching staff of the University of Siegen (according to the offer of elective modules)

Additional information:

MB 21 Bachelor Thesis

	Workload	Credit points	Study semesters	Frequency of the offer	Duration
	360 h	12 CP	6th sem.	Summer semester Winter semester	1 semester

Teaching	Contact time	Home study	Planned size of group
Final project	0 h	360 h	---

Learning outcomes / competencies

Art. 23, section 1 of the Examination Regulations:
[1]The Bachelor Thesis is a final thesis. [2]Students should demonstrate that they are able to independently work on a practice-oriented task belonging to their technical field within a prescribed period, both regarding its technical details and also regarding the interdisciplinary connections according to the academic and practical requirements of the degree programme. [3]The Bachelor Thesis consists normally of an independent study regarding a task from the field of construction, experiments, design, urban development or any other engineering field and of a written explanation of its solution. 4It consists of the Bachelor Thesis mentioned in sentence 3 and an oral colloquium.

Art. 23, section 10 of the Examination Regulations:
[1]The oral colloquium supplements the Bachelor Thesis and its grades. [2]It is held to determine whether the student is able to orally present the results of the Master Thesis, its technical bases, its interdisciplinary relations and the relations that go beyond the subject, to independently provide reasons for that and to estimate the importance of the Thesis for practice and research. [3]The colloquium will be held as an oral examination and will last at least 30 to a maximum of 45 minutes. The colloquium shall be held within three months after the submission of the Bachelor Thesis.

Contents

See competencies.

Teaching format
Independent academic work with colloquium.

Requirements for attending course

Art. 22, section 1 of the Examination Regulations:
Students who have completely obtained 150 credits will be admitted to the Bachelor Thesis. For more details, please refer to the Examination Regulations.

Examination format

Written examination corresponding to art. 23 section 1 of the Examination Regulations and colloquium corresponding to art. 23 section 10 of the Examination Regulations (min. 30 min., max. 45 min).

Requirement for the awarding of credit points

Completion of the module assignments with a grade of at least 4.0.

Weighting of the grade for the final grade: 12/180 (6.66 %)
Module leader(s) and principal tutor(s) All professors in the Department of Architecture
Additional information: ---