

Module number	Module name	Module type (MM/RE/OE)	Semester of study (recommended)	Module organiser
ARC-B-Mod-102	Illustration and Design I	MM	1	Prof. Dr. Staffa

Department	Duration
Architecture	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	4 WHS (= 42 contact hours)	108 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Free Design I:

- To develop artistic, creative and design abilities, conceptual development capacity and experimental approaches
- To develop confidence in dealing with form and space
- Ability to develop conceptual images, confidence in design processes, high level of appreciation from formal perspective

Freehand Drawing I:

- To gain basic skills with the aim of being able to sketch and illustrate simple architectural structures freehand
- To reinforce capacity to perceive architectural proportions as a whole and in detail

Descriptive Geometry (Skills: Analysis and visualisation instruments):

- Ability to apply construction and presentation methods on the basis of descriptive geometry

Module content

Free Design I:

Free-style painting and drawing of form in the aesthetic sense, free perspective drawing, movement and sound-induced drawing and transformations in 3D objects, form and colour studies, design and construction of large-format spatial environments, material images and reliefs, museum visits with on-site sketches, analyses of analogous examples in art, architecture and music.

Freehand Drawing I:

Freehand sketching and drawing techniques are taught in smaller guided and successive sessions and put to the test in practical exercises.

Descriptive Geometry (Skills: Analysis and visualisation instruments):

Principles of descriptive geometry in architecture

Recommended literature

Varying

Forms of teaching and study

Free Design I: 1.5 CPs, seminar / exercise (1 WHS)

Freehand Drawing I: 1 CP, seminar / exercise (1 WHS)

Descriptive Geometry (Skills): 2.5 CPs, seminar / exercise (2 WHS)

Examination(s)

Precondition(s) for examination

Regular, active participation (min. 80%) in seminars/exercises – compulsory attendance

Examination type

Examination duration (for written/oral examinations)

Documentation / assignments / extended essay

Calculation of module grade

Free Design I: Grades from documentation / assignments / extended essay (40%)

Freehand Drawing I: Grades from documentation / assignments / extended essay (20%)

Descriptive Geometry (skills 2): Grades from documentation / assignments / extended essay (40%)

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Module application / admission requirement for further modules (mandatory or recommended)

Module frequency
Annual
Language of instruction
German
Last update: 20.03.2017

Module number	Module name	Module type (MM/RE/OE)	Semester of study (recommended)	Module organiser
ARC-B-Mod-103	Experimental Construction Sustain – Join – Connect	MM	1	Prof. Dr. Staffa Prof. Dr. Willkomm

Department	Duration
Architecture	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	4 WHS (= 42 contact hours)	108 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Students acquire skills to analyse and start to apply the basic principles of supporting, joining and connecting components into an overarching structure through experimental construction using models. The creative space of construction is demonstrated with a variety of design and drafting tasks, and the students analyse their work from graphical, spatial and structural perspectives. The qualification objective is:

- to develop constructional drafting as a core qualification of practising architects
- to use experimental work to experience, become familiar with and develop knowledge of key phenomena of joining and connecting components in the interrelations of design, function, material and support structures
- to acquire basic skills and knowledge through students' own queries and alternative approaches with discussions to analyse, evaluate and apply various construction strategies

Module content

- Initially elementary and subsequently more complex tasks with simple constructional elements provide an introduction to the application of constructional tools and load-bearing analysis capabilities in work
- Confidence in constructional drafting using constructional principles
- Recognition of the significance of constructional working methods from the concept to fine details as an important element in architectural drafting
- Initial recognition of the interrelations of constructional elements, support structures and design
- Ability to evaluate existing and student's own drafting and construction solutions
- Initial insight into the nature / behaviour of simple support structures, their materials and constructional arrangement
- Lectures + exercises in small groups
- Joining and connecting for constructional drafting in building analyses, model building and drawings
- Module is taught through lectures and work in seminar groups
- Several assignments must be completed each semester
- Students explore the interrelation of construction and drafting in both guided and independent theoretical and practical learning processes

Recommended literature

Varying

Forms of teaching and study

Experimental Construction: 5 CPs, lecture and exercise / seminar (4 WHS)

Examination(s)

Precondition(s) for examination

Regular, active participation (min. 80%) in exercises/seminars – compulsory attendance

Examination type

Assignments / extended essay

Examination duration (for written/oral examinations)

Calculation of module grade

Grades from assignments / extended essay (100%)

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Module application / admission requirement for further modules (mandatory or recommended)

Recommended preparation for the module Construction + Support Structures I

Module frequency

Annual

Language of instruction

German

Module number	Module name	Module type (MM/RE/OE)	Semester of study (recommended)	Module organiser
ARC-B-Mod-104	History and Theory of Architecture I	MM	1	Prof. Dr. Düwel

Department	Duration
Humanities and Social Sciences	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	4 WHS (= 42 contact hours)	108 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

History and Theory of Architecture I:

Basic skills to identify historic developments and qualities in the built environment. The course objective is to introduce skills and competencies to enable the most independent reflection possible with regard to the evaluation, classification and interpretation of historic and contemporary references in architectural and urban development.

BASICS: History of Architecture and Structural Design:

The objective of this module is to provide an overview of selected aspects from the history of western architecture and European urban development. In so doing, the students learn the most important principles in the history of architecture, in particular the interrelation between form and construction subject to societal and technical development.

Module content

Methodological fundamentals comprise description, comparison, scientific analysis and historical-critical evaluation. Societal, political, cultural, architectural-historical and urban planning aspects from a variety of epochs are incorporated into the evaluation in order to achieve a reflective perception of our complex built environment.

Architectural theory is presented as an integral component of architectural history, as it cannot be applied absolutely but rather within a temporal context. As the history of constructional ideas, architectural theory does not exist "alongside" buildings but instead always applies to a real-life historical context.

History and Theory of Architecture I:

This conveys fundamental knowledge of the history of architecture, from Antiquity through to the present day.

BASICS: History of Architecture and Structural Design:

This conveys fundamental knowledge of the history of architecture and construction engineering

- Development of engineering sciences
- Stonework constructions of Antiquity and the Renaissance
- The consequences of the Industrial Revolution: new construction with iron
- The new material concrete and its impact on the art of building
- The paradigm of lightweight construction
- The Second Industrial Revolution: digitalisation of the design and implementation process

Recommended literature

Herbert Ricken, Der Architekt, Stuttgart 1990, Winfried Nerdinger (Ed.), Der Architekt. Geschichte und Gegenwart eines Berufsstandes, Munich 2013

Forms of teaching and study

History and Theory of Architecture I: 2.5 CPs, lecture (2 WHS)

BASICS: History of Architecture and Structural Design: 2.5 CPs, lecture (2 WHS)

Examination(s)

Precondition(s) for examination

Examination type

Examination duration (for written/oral examinations)

Written examination / assignments / extended essay

Calculation of module grade

History and Theory of Architecture: Grades from written examination / assignments / extended essay (50%)

BASICS: History of Architecture and Structural Design: Grades from written examination / assignments / extended essay (50%)

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Module application / admission requirements for further modules (mandatory or recommended)
Recommended preparation for participation in further modules in the History and Theory of Architecture department
Module frequency
Annual
Language of instruction
German, English
Last update: 13/03/2017

Module number	Module name	Module type (MM/RE/OE)	Semester of study (recommended)	Module organiser
ARC-B-Mod-201	Drafting II	MM	2	Prof. Weinmiller

Department	Duration
Design + Drafting	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
10 CPs (= 300 hour workload)	5 WHS (= 52.5 contact hours)	247.5 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Drafting II:

- To develop increasing confidence in drafting through basic drafting and technical skills and assessment abilities
- To recognise the significance of architectural spatial development and work through exemplary exercises
- Ability to develop task-related independent ideas
- Ability to evaluate existing design solutions and develop own, problem-oriented design solutions

Landscape design:

- To develop enhanced drafting skills through knowledge of the functional, socio-economic, ecological, cultural and aesthetic interrelations of urban and outdoor spaces.
- To gain an understanding of urban development issues and matters of cultural and aesthetic landscape design as part of an overarching design practice.

Module content

Drafting II:

- To expand basic skills in the analysis, evaluation and application of essentially different drafting methods
- To further develop drafting as a basic qualification for all architects in differentiated steps
- To complete architectonic form-finding exercises on the basis of dynamic, space-creating movement patterns
- To complete initial location-specific drafting exercises
- To convey task-related basic skills for the individual exercises

Landscape design:

- To convey the principles of open space planning and apply analytical methods with a variety of focuses

Recommended literature

Varying

Forms of teaching and study

Drafting II: 9 CPs, project / seminar / exercise (4 WHS)

Landscape design: 1 CP, lecture (1 WHS)

Examination(s)

Precondition(s) for examination

Regular, active participation (min. 80%) in project/seminar/exercise – compulsory attendance

Examination type

Examination duration (for written/oral examinations)

Drafting II: Extended essay / presentation

Landscape: none

Calculation of module grade

Drafting II: Grades from extended essay / presentation 100%

Landscape: 0% (ungraded)

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Successful completion of Drafting I is required

Module application / admission requirement for further modules (mandatory or recommended)

Module frequency

Annual

Language of instruction

German

Module number	Module name	Module type (MM/RE/OE)	Semester of study (recommended)	Module organiser
ARC-B-Mod-202	Illustration and Design II	MM	2	Prof. Dr. Staffa

Department	Duration
Architecture	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	4 WHS (= 42 contact hours)	108

Objectives and content

Module qualification objectives (targeted learning outcomes)

Free Design II:

- To develop artistic, creative and design abilities, conceptual development capacity and experimental approaches
- To develop confidence in dealing with form and space
- Ability to develop conceptual images, confidence in design processes, high level of appreciation from formal perspective

Freehand Drawing II:

- To develop the ability to depict architectural content both in more complex contexts and in more detail

CAD (Skills: Analysis and visualisation instruments)

- Ability to apply current digital display methods
 - To gain an understanding of architectural representation in more complex contexts
- To acquire knowledge of basic rules of display presentations and their application

Module content

Free Design II:

- Free painting and drawing of form in the aesthetic sense, free perspective drawing, movement and sound-induced drawing and transformations in 3D objects
- Form and colour studies
- Drafting and construction of large-format spatial environments
- Material images / reliefs
- Museum visits with on-site sketches
- Analysis of analogous examples in art, architecture and music

Freehand Drawing II:

- Outdoor freehand sketching and drawing with multiple vanishing points
- Sketching of details

CAD (Skills: Analysis and visualisation instruments)

- Techniques for graphical dialogue in design, depiction of the creative approach to the design process in manual and computer-assisted sketching, test series with varying levels of abstraction, e.g. for the site plan, floor plan, cross-section and front view
- Development of a representation form for the design presentation in the second semester
- Methods, rules and procedures in descriptive geometry for architectural presentation (e.g. shadows, central projection, perspectives, standpoint reconstruction from a perspective view)
- Drawing and designing with CAD programmes on a level plane (2D) and in space (3D). Drawing, editing, depicting and plotting in different depths of detail, e.g. based on a design or construction exercise from the first or second semester in floor plan, cross-section and front view

Recommended literature

Varying

Forms of teaching and study

Free Design II: 1.5 CPs, seminar / exercise (1 WHS)

Freehand Drawing II: 1 CP, seminar / exercise (1 WHS)

CAD (Skills 3): 2.5 CPs, seminar / exercise (2 WHS)

Examination(s)

Precondition(s) for examination

Free Design II, Freehand Drawing II, CAD (Skills):

Regular, active participation (min. 80%) in seminars/exercises – compulsory attendance

Examination type	Examination duration (for written/oral examinations)
Documentation / assignments / extended essay	

Calculation of module grade
Free Design I: Grades from documentation, assignments / extended essay (40%)
Freehand Drawing I: Grades from documentation, assignments / extended essay (20%)
CAD (Skills 3): Grades from documentation, assignments / extended essay (40%)

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)
Module application / admission requirement for further modules (mandatory or recommended)
Module frequency
Annual
Language of instruction
German
Last update: 20/03/2017

Module number	Module name	Module type (MM/RE/OE)	Semester of study (recommended)	Module organiser
ARC-B-Mod-203	Building Design	MM	2-4	Prof. Sill

Department	Duration
Design + Drafting	2 semesters

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	5 WHS (= 52.5 contact hours)	97.5 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Building Design I:

Building design serves to convey knowledge and is therefore an important component of the theoretical basis of drafting. The objective is to enable a critical evaluation of building structures and building typologies as well as functional and use processes and the conditions of their urban development and architectural implementation. Interaction with historical, social, cultural, economic-technical and legal aspects provides skills and decision-making aids for use in the students' own drafting.

Building Design II:

This course aims to convey the complexity of the drafting process, in which individual ideal requirements overlap and are coupled with instrumental knowledge and specific functional requirements. Building design aims to clarify and comprehend the objectifiable and analysable criteria and, on this basis, to understand the respective subjective interpretation of an architectural solution. This facilitates the critical analysis of, and reflection on, even complex buildings and urban situations, and thereby also the students' own architectural drafting.

Module content

Building Design I:

Living and urban development context / open design and detached houses, multi-storey housing construction: settlement systems, orientation and zoning, eligibility conditions for state-subsidised housing construction, minimum room sizes and ease of furnishing, special urban circumstances / temporary residence: hotels, boarding houses, student living, youth hostels

Building Design II:

Building design defines the structural and typological criteria of a building or group of buildings. As part of this process, the experiences gained and qualities of the individual concepts are underlined. In so doing, it is important that urban development and architectural structures are not designated a specific use, but can instead be reinterpreted at each drafting stage. Building design teaches us about architects, teams and their work within various projects and tasks. Overarching objectives should be clarified and simultaneously personified if they are recognisable as such and if it would be relevant to the drafting process to do so.

The buildings or building groups can have a diverse range of uses: workspace, retail space, university and college buildings, schools, social functions, nurseries, office buildings, commercial premises and exhibition buildings. The module addresses historical developments and the status quo, new office formats, organisational structures, fixed and flexible constructional structures, German Workplace Ordinance (ArbStättV) / application and interpretation of individual typologies, national and international developments.

Lectures are complemented by exercises directly related to the content conveyed in lectures.

Design tasks and "finger exercises" immediately put the acquired knowledge into practice and apply it to the students' own practice. The lecture content can also be reflected upon and further reinforced by the interaction with analysis tasks of contemporary and/or type-specific architectures.

Recommended literature

Varying

Forms of teaching and study

Building Design I: 2.5 CPs, lecture and exercise (2.5 WHS)

Building Design II: 2.5 CPs, lecture and exercise (2.5 WHS)

Examination(s)

Precondition(s) for examination

Regular, active participation (min. 80%) in exercises – compulsory attendance

Examination type

Examination duration (for written/oral examinations)

Presentation / extended essay / assignments

Calculation of module grade
Building Design I: Grades from presentation / extended essay / assignments 50%
Building Design II: Grades from presentation / extended essay / assignments 50%

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)
Module application / admission requirement for further modules (mandatory or recommended)
Recommended preparation for participation in further modules in the Building Design department
Module frequency
Annual
Language of instruction
German
Last update: 13/03/2017

List of Modules

Bachelor's in Architecture
HCU Hamburg

Module number	Module name	Module type (MM/RE/OE)	Semester of study (recommended)	Module organiser
ARC-B-Mod-204	Construction + Support Structures I	MM	2	Prof. Dr. Staffa

Department	Duration
Architecture	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
7.5 CPs (= 225 hour workload)	6 WHS (= 63 contact hours)	162 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Structural Design I:

Learning outcomes:

- To further consolidate and apply constructional drafting as a core qualification of practising architects on the basis of competencies gained in the first semester in the area of joining and connecting
- To expand basic skills in the analysis, evaluation and application of essentially different construction systems in skeleton construction and solid construction.

Competencies:

- Increasing assurance in drafting through basic constructional skills and assessment abilities
- Recognition of the significance of constructional working methods from the concept to fine details as an important element in architectural design
- Recognition of the interrelations of constructional elements and system-specific formation of support structures and building envelopes
- Ability to evaluate existing design solutions and develop own, problem-oriented constructional solutions

Support Structure Design I

- Introduction to the world of structural engineers, taking simple, static systems as examples.
- Insight into elementary static systems and their fundamental static stresses and verifications
- Students learn the fundamental terms and concepts used by structural engineers

Module content

Structural Design I:

- Increasingly broad range of construction systems with a focus on fundamental and detailed knowledge of dimensional coordination as well as manual and industrial construction systems
- Construction and component-oriented examples as the basis of discussion for the exercises
- Constructional drafting is practised and expanded upon in building analyses, model building and drawings
- Module is taught through lectures and exercises in seminar groups
- Several different exercises must be completed each semester
- Students explore the interrelation of construction and design through guided and independent theoretical and practical learning processes
- Successful completion of all analytical and constructional drafting exercises
- For tasks completed in groups, the participants' individual contributions must be evident.

Support Structure Design I

- Clarification of the most important concepts and terms, without which a conversation with structural engineers is impossible:
static system, moment line, stress, deformation
- Definition and calculation of the moment line as the fingerprint of a support structure and reference to potential design of the support structure and starting point for pre-dimensioning
- Initial approaches to pre-dimensioning

Recommended literature

Varying

Forms of teaching and study

Structural Design I: 5 CPs, lecture and exercise (4 WHS)

Support Structure Design I: 2.5 CPs, lecture and exercise (2 WHS)

Examination(s)

Precondition(s) for examination

Regular, active participation (min. 80%) in exercises — compulsory attendance

Examination type

Examination duration (for written/oral examinations)

Structural Design I: Assignments / extended essay Support Structure Design I: Extended essay and written examination	
Calculation of module grade	
Structural Design I: Grades from assignments / extended essay 67%; Support Structure Design I: Grades from extended essay, written examination 33%	

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)
Formal: Completion of the Experimental Construction module is recommended as preparation for participation
Module application / admission requirements for further modules (mandatory or recommended)
Module frequency
Annual
Language of instruction
German
Last update: 31/08/2017

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-205	Physics + Technology I	MM	2 + 3	Prof. Dr. Dietrich Prof. Braun

Department	Duration
Construction and Technology	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	4 WHS (= 42 contact hours)	108 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Building Physics I:

- To recognise and prevent building physics issues concerning thermal insulation and protection against moisture when designing
- To acquire basic knowledge of thermal building physics
- To acquire the ability to evaluate planned and existing structural designs (roofs, walls, floors) in new and existing buildings both physically and in terms of occupant comfort

Energy-Optimised Construction I:

- To acquire basic knowledge of energy-optimised planning and construction
- Ability to conduct daylight-optimised building planning
- Application of such knowledge to students' own drafts

Building Services I:

- To acquire basic knowledge of energy-efficient building services
- To develop zero-energy and plus-energy housing concepts for their own drafts (Drafting III)

Module content

This module lays the foundations for comprehension of a building's envelope and technical services as integral components of architectural drafts and their integration into an energy-efficient whole of high architectural quality. The students should grasp the interrelations between statutory requirements and the resulting design-related and practical constructional requirements. The module places particular value on creative and constructional incorporation of the required elements.

Building Physics I:

Qualitative interrelations, requirements and verification processes for (e.g.):

- thermal energy (storage and transport)
- thermal insulation
- thermal bridges
- air humidity, evaporation and condensation
- structural designs and their building physics properties

Energy-Optimised Construction I:

Outdoor climate, comfort, building ventilation, airtight building envelope, daylight and artificial light, windows and shading, passive solar energy use and summer thermal insulation, passive air-conditioning, synergies, building simulation, Energy Saving Ordinance (EnEV) and DIN 18599 (an overview)

Building Services I:

- Principles of solar building
- Balance sheet thinking
- Renewable Energy Heat Act (EEWärmeG)
- Radiant energy, passive and active solar energy use (transparent thermal insulation, photovoltaics, solar thermal energy, etc.), biomass use, thermal pumps, geothermal energy

Recommended literature

Building Physics I:

Lecture notes — literature list to complement study contained in these notes

Energy-Optimised Construction I:

Lecture notes — literature list to complement study contained in these notes

Building Services I:

M. Hegger et al.: Energy Manual: Sustainable Architecture, Basel, Boston, Berlin 2008

Forms of teaching and study
Building Physics I: 2.5 CPs, lecture / exercise (2 WHS) Energy-Optimised Construction I: 1 CP, lecture / exercise (1 WHS) Building Services I: 1.5 CPs, lecture and exercise (1 WHS)

Examination(s)

Precondition(s) for examination	
Examination type	Examination duration (for written/oral examinations)
Building Physics I: Presentation / assignments / extended essay / written examination Energy-Optimised Construction I: Extended essay Building Services I: Extended essay	
Calculation of module grade	
Building Physics I: Grades from presentation / assignments / extended essay / written examination 50% Energy-Optimised Construction I: Grade from extended essay 20% Building Services I: Grade from extended essay 30%	

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)
Building Physics I (2nd semester): None Energy-Optimised Construction I (3rd semester): Recommended preparation: Successful participation in Building Physics I Building Services I (3rd semester) : Recommended preparation: Successful participation in Building Physics I
Module application / admission requirement for further modules (mandatory or recommended)
Physics + Technology II (recommended)
Module frequency
Annual
Language of instruction
German
Last update: 13/03/2017

Module number	Module name	Module type (MM/RE/OE)	Semester of study (recommended)	Module organiser
ARC-B-Mod-301	Drafting III	MM	3	Prof. Sill

Department	Duration
Design and Drafting	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
10 CPs (= 300 hour workload)	4 WHS (= 42 contact hours)	258 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Drafting – Annual Project with Drafting IV:

To recognise the mutual interdependencies of location, role, conceptual idea, form and function in preliminary drafting and drafting, construction, materials and technology. Ability to develop and reflect upon conceptual and drafting results in complex contexts through both reciprocal and cumulative working steps (Drafting III) to reach the objective of exemplary execution and detail planning (Drafting IV in 4th semester follows)

Aim: complex drafting and urban development processing of an architectural task of high conceptual, functional and creative quality.

Module content

As cumulative modules, Drafting III and Drafting IV comprise the entire spectrum of a drafting and work planning task "From the location – to the idea – through to the detail". Drafting III focuses on the following teaching content:

- Methods for cognitive and sensitive analysis of a location and the problem definition, methods, pathways and procedures for concept development in reaction to location and function
- Development and translation of concept ideas into tangible pre-drafts and drafts through critical assessment of comparable architectural projects
- Reflection on, and discussion and evaluation of, respective interim results and drafting results as a whole
- Possible display/presentation methods in sketches, drawings, CAD, images, models, speech, writing
- Introductory lectures on the aforementioned teaching content, excursions to the project site and exemplary projects, supplementary seminars interspersed with exercises on individual aspects of the task
- Independent theoretical and practical work on the concept and draft, managed through weekly individual and group guidance during the drafting process
- Presentation and discussion of all respective interim results on a minimum of three occasions during the semester, final presentation at the end of the semester
- Town planners, representatives of public and private institutions and guest critics will be invited to the interim presentations as appropriate
- Expert representatives from building and support structure construction participate in the final presentation

Recommended literature

Varying

Forms of teaching and study

Drafting III: 10 CPs, project / seminar / lecture (4 WHS)

Examination(s)

Precondition(s) for examination

Regular, active participation (min. 80%) in seminar – compulsory attendance

Examination type	Examination duration (for written/oral examinations)
Semester essay / presentation	

Calculation of module grade

Grades from extended essay / presentation (100%)

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Successful completion of Drafting I and Drafting II in the 1st + 2nd semesters.

Module application / admission requirements for further modules (mandatory or recommended)

Entry requirement for Drafting IV – continuation as annual project.

Module frequency

Annual

Language of instruction

German

Module number	Module name	Module type (MM/RE/OE)	Semester of study (recommended)	Module organiser
ARC-B-Mod-302	City and Space	MM	3	Prof. Sill

Department	Duration
Design and Drafting	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	3 WHS (= 31.5 contact hours)	118.5 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Fundamentals of Urban Development:

The students acquire a fundamental understanding of the importance of urban development, landscape and spatial planning in synergy with architecture. They are taught to observe and reflect on urban contexts through a differentiated approach.

Module content

- Introduction into the fundamental aspects of the social, functional and aesthetic significance of space and its construction
- Recognition and recording of various urban forms, structures and action patterns
- Translation of the information gathered into different presentational forms
- Excursions to, and explorations of, urban space

Recommended literature

Varying

Forms of teaching and study

Fundamentals of Urban Development: 5 CPs, lecture and exercise and project (3 WHS)

Examination(s)

Precondition(s) for examination

Examination type

Assignments / extended essay and written examination

Examination duration (for written/oral examinations)

Calculation of module grade

Grades from assignments / extended essay and written examination 100%

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Module application / admission requirements for further modules (mandatory or recommended)

Module frequency

Annual

Language of instruction

German

Last update: 13/03/2017

Module number	Module name	Module type (MM/RE/OE)	Semester of study (recommended)	Module organiser
ARC-B-Mod-303	Construction + Support Structures II	MM	3	Prof. Dr. Kritzmann

Department	Duration
Construction and Support Structures	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
7.5 CPs (= 225 hour workload)	7 WHS (= 73.5 contact hours)	151.5 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Structural Design II:

- Deepened basic knowledge of building construction, comprising
 - basic knowledge of the variety of building components and materials
 - recognition of material properties relevant to construction
 - the proper joining and layering of building components and materials
- Students learn to:
 - represent their own constructions clearly and comprehensively in plans;
 - define, design and present key guiding details in clear scales, and
 - recognise the interrelation between drafting, construction and support structures.

Building materials:

- Fundamental knowledge of, and practical experience (in the laboratory) with, the most important materials in constructional drafting

Support Structure Design II:

- Knowledge operating principles and pre-dimensioning of support frameworks for hall constructions using various materials:
 - plate girders, suspended girders, trussed beams, suspension cables, arches, frames, bracing, etc.
- Understanding of the drafting, designing and pre-dimensioning of support structures for simple hall constructions

Module content

Structural Design II:

- Lectures on architectural design, construction and the joining of selected building components: floors, walls, ceilings incl. floor constructions, stairs, inclined roofs, flat roofs, incl. openings such as windows, doors and glass constructions
- Building on the teaching content in the lectures, the students develop a structure of their own based on a set building task in seminars
- The teaching content is conveyed in lectures and acquired through reading specialist literature
- The teaching content is applied in construction exercises in the seminar
- Students develop their own constructions as weekly assignments

Building materials:

- Knowledge communicated and some laboratory testing conducted on the key material groups (mineral building materials, metals, wood and organic materials, synthetic materials, glass)

Support Structure Design II:

- Lectures on hall construction
 - Operating principles and pre-dimensioning of support frameworks for hall constructions using various materials:
- Exercises on hall construction
 - Processing and clarification of exercise tasks in field of support structure design, construction and pre-dimensioning

Recommended literature

Structural Design II (reference works):

- Frick/Knöll: Baukonstruktionslehre
- Edition Detail: Konstruktionsatlanten, Detail Praxis
- Staffa: Tragwerkslehre. Grundlagen, Gestaltung, Beispiele

Forms of teaching and study

Structural Design II: 4 CPs, lecture and exercises (4 WHS)

Building materials: 1 CP, seminar / exercises in the materials laboratory (1 WHS)

Support Structure Design II: 2.5 CPs, lecture / exercises (2 HWS)

Examination(s)	
Precondition(s) for examination	
Structural Design II: Successful, active participation (min. 80%) in exercises Building materials: Successful, active participation (min. 80%) in seminar and exercises Support Structure Design II: Successful, active participation (min. 80%) in exercises	
Examination type	Examination duration (for written/oral examinations)
Structural Design II: Assignments / extended essay Building materials: Extended essay Support Structure Design II: Extended essay / written examination	
Calculation of module grade	
Structural Design II: Grades from assignments / extended essay (54%) Building materials: Grade from extended essay (13%) Support Structure Design II: Grades from extended essay / written examination 33%	

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)
Formal: <ul style="list-style-type: none"> • Successful completion of the Construction + Support Structures I module Content: <ul style="list-style-type: none"> • Simultaneous knowledge in Materials and Support Structure Design II • Independent designing, study of sources (construction examples) and their critical assessment/analysis • Good use of graphic forms of presentation
Module application / admission requirements for further modules (mandatory or recommended)
Structural Design II: Successful completion of this module is a precondition for participation of the Structural Design III module Support Structure Design II: Successful completion of this module is a precondition for participation of the Support Structure Design III module
Module frequency
Annual
Language of instruction
German
Last update: 20/03/2017

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-304	History and Theory of Architecture II	MM	3	Prof. Dr. Düwel

Department	Duration
Humanities and Social Sciences	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
2.5 CPs (= 75 hour workload)	2 WHS (= 21 contact hours)	54 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Learning outcomes:

Basic knowledge of aspects of the history and theory of architecture and urban development from Antiquity to modern day – building on the lectures in History and Theory of Architecture I in the previous semester. Basic knowledge of methods by which to critically analyse architecture and its theory as well as the history of urban development. Fundamental knowledge of the development of architecture and urban development in various epochs, as well as the specialist terminology required for a thorough understanding and the ability to grade and classify buildings.

Competences:

Enhanced skills to assess and analyse historic developments and qualities in the built environment. Ability to reflect independently on aspects of architecture and urban development in their respective cultural and societal context.

Module content

Methodological fundamentals comprise description, comparison, scientific analysis and historical-critical evaluation. Societal, political, cultural, architectural, urban planning and formal aesthetic aspects from a variety of eras are incorporated in the evaluation in order to achieve a reflective perception of our complex built environment.

Architectural theory is presented as an integral component of architectural history, as it cannot be applied absolutely but rather within temporal context. As the history of constructional ideas, architectural theory does not exist “alongside” buildings but instead always applies to a real-life historical context.

Fundamental knowledge is gained of the history of architecture and urban development from Antiquity to the present day.

Recommended literature

Wolfgang Braunfels, Urban Design in Western Europe, Chicago 1990; Georg Germann, Einführung in die Geschichte der Architekturtheorie, Darmstadt 1980; Hanno-Walter Kruft, A History of Architectural Theory, Princeton, 1994.

Forms of teaching and study

History and Theory of Architecture II: 2.5 CPs, lectures (2 WHS)

Examination(s)

Precondition(s) for examination

Examination type	Examination duration (for written/oral examinations)
Written examination / assignments / extended essay	min. 45 minutes
Calculation of module grade	
Grades from written examination / assignments / extended essay (100%)	

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Formal: A precondition is successful participation in History and Theory of Architecture I.

Module application / admission requirements for further modules (mandatory or recommended)

Module frequency

Annual

Language of instruction

German

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-401	Drafting IV	MM	4	Prof. Sill

Department	Duration
Design and Drafting	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
10 CPs (= 300 hour workload)	4 WHS (= 42 contact hours)	258 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Drafting – Annual Project with Drafting III:

To recognise the mutual interdependencies of location, role, conceptual idea, form, function, construction, materials and technology. Planning and drafting skills in order to further develop conceptual and drafting results in material and technical terms through cumulative working steps as part of an holistic approach, to reach the objective of execution-oriented construction and detailed planning for architectural drafting of a high level of quality and complexity. Planning and drafting skills to incorporate the requirements and use the opportunities from the disciplines of building construction, support structures and building physics

Module content

As cumulative modules, Drafting III and Drafting IV comprise the entire spectrum of a drafting and work planning task "From the location – to the idea – through to the detail". Drafting IV focuses on the following teaching content:

- Pathways and procedures to develop conceptual ideas and preliminary considerations for support structures, building envelopes and façades as well as for building services and for students' own, existing drafts, as preparation for the work and consultancy meetings with representatives of specialist disciplines
- Discussion of and consultancy on conceptual ideas and preliminary conditions for support structures, building envelopes and façades with collaborating representatives from specialist disciplines
- Evaluation of results on consultancy with regard to consequences for form and spatial organisation, technology and material, and incorporation of results in drafting and execution planning
- Definition of exemplary details significant to drafting and which influence form
- Consequent development of selected specific guiding details in suitable scales
- Integration of all detail considerations in exemplary execution planning
- Introductory lectures on the aforementioned teaching content, excursions to exemplary projects, supplementary seminars interspersed with exercises on individual aspects
- Independent theoretical and practical work to translate concept and drafting into tangible construction and detail planning, managed through weekly individual and group guidance in interdisciplinary collaboration with representatives of specialist disciplines from building construction, support structure construction and building physics
- Presentation and discussion of all respective interim results on three occasions in the semester
- Final presentation at the end of the semester, also in interdisciplinary collaboration

Recommended literature

Varying

Forms of teaching and study

Drafting IV: 10 CPs, project / seminars / lectures (4 WHS)

Examination(s)

Precondition(s) for examination

Regular, active participation (min. 80%) in projects/seminars – compulsory attendance

Examination type

Examination duration (for written/oral examinations)

Semester essay / presentation

Calculation of module grade

Grades from extended essay / presentation

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Successful participation in, and completion of, Drafting III.

Module application / admission requirements for further modules (mandatory or recommended)

Module frequency

Annual

Language of instruction

German

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-402	Construction + Support Structures III	MM	4	Prof. Dr. Kritzmann

Department	Duration
Construction and Technology	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
7.5 CPs (= 225 hour workload)	7 WHS (= 73.5 contact hours)	151.5 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

- Ability to define own drafting and construction ideas
- Ability to critically analyse constructional examples
- To recognise the interdependencies of façade and constructional elements and the system-specific formation of support structures and building envelopes, as well as their impact on building services
- Ability to evaluate existing design solutions and develop own, task-oriented constructional solutions
- Ability to display the interrelations of drafting, construction, physics and technology in various scales and media.
- Ability to develop energy supply concepts within the meaning of the EU Buildings Directive

Module content

Structural Design III:

- Further consolidation of knowledge of constructional and material properties of various building materials, building on existing knowledge from structural theory classes in the 2nd and 3rd semesters
- Construction and component-oriented presentation of selected examples with deeper exploration of certain (selected) components relating to scope of Drafting III
- Consolidation of creative constructional, urban development, building physics and building services-related knowledge in the field of construction-related issues

Support Structure Design III:

- Introduction to support structures of multi-storey building with the topics of multi-storey building systems, solid construction, composite construction, building structures, supports, foundations
- Pre-dimensioning of ceilings, ceiling joists, walls, braces, supports and foundations in multi-storey building
- Application of acquired skills and knowledge in drafting of structural support through example exercises

Processing Details in Drafts for Structural Systems or Building Envelope or Technology:

- **Support Structure Drafts:** Introduction to the details of the pre-dimensioned components in the support structure draft
- **Building Envelope Drafts:** Development of a collection of details in students' own drafting in accordance with structural design requirements
- **Technology:** Consolidation of knowledge of energetic requirements, passive solar optimisation and the use of renewable energy sources in students' own drafting (zero-energy and plus-energy buildings), impact on building services

Recommended literature

Structural Design III as reference works:

- Frick/Knöll: Baukonstruktion
- Edition Detail: Konstruktions-Atlanten, Detail Praxis

Forms of teaching and study

Structural Design III: 4 CPs, lectures and exercises (4 WHS)

Support Structure Design III: 2.5 CPs, lectures / exercises (2 WHS)

Processing Details in Drafts: 1 CP, lectures / exercises (1 WHS)

Examination(s)

Precondition(s) for examination

Regular, active participation (min. 80%) in exercises — compulsory attendance

Examination type	Examination duration (for written/oral examinations)
Structural Design III: Seminar essays / extended essay Support Structure Design III: Extended essay Processing Details in Drafts: Extended essay	
Calculation of module grade	
Structural Design III: Grades from assignments / extended essay 54%	

Support Structure Design III: Grade from extended essay 33% Processing Details in Drafts: Grade from extended essay 13%
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Supplementary information

Required knowledge / precondition(s) for participation (in form and content)
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Structural Design:

Formal:

Recommended preparation:

- Successful completion of the Structural Design II module
- Modules in Drafting and Structural Design in 1st to 3rd semester

Module application / admission requirements for further modules (mandatory or recommended)
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Module frequency

Annual

Language of instruction

German

Last update: 20/03/2017

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-403	Physics + Technology II	MM	4	Prof. Braun Prof. Dr. Dietrich

Department	Duration
Construction and Technology	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	5 WHS (= 52.5 contact hours)	97.5 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Building Physics II / EOC II:

To acquire deeper knowledge of energy-optimised planning and construction To gain expertise to recognise the interrelations between building form, façades and the resulting user comfort and energy consumption in early planning phases and optimise students' own drafting.

Building Services II:

To acquire fundamental knowledge of technical fit-out in the fields of:

- heating and ventilation
- electrical and artificial light planning
- sanitary engineering, water and sewage, use of rain water

To gain expertise to identify effects on drafting as well as on coordination of detail planning and execution with corresponding specialist planners.

Module content

Energy-Optimised Construction II:

Outdoor climate, comfort, building ventilation, airtight building envelope, daylight and artificial light, windows and shading, passive solar energy use and summer thermal insulation, passive air-conditioning, synergies, building simulation, Energy Saving Ordinance (EnEV) and DIN 18599 (an overview)

Building Services II:

- Criteria for planning heating and ventilation systems in energy-efficient buildings. Heat load calculations and configuration of heating surfaces. Dimensioning of ventilation systems. Effects on floor plan and drafting
- Configuration and set-up criteria for electrical installations; layout, in particular for sanitary systems; safety systems (foundation earth electrodes, equipotential bonding, FI switches, safety areas); fundamentals of artificial light planning and layout of workplace lighting. Effects on floor plan and drafting
- Criteria for washroom planning; sanitary equipment and its axial dimensions; tiling plans; configuring and dimensioning water transport systems; configuring and dimensioning rainwater and wastewater transport, from individual connections to sewage systems; drainage, separation and lifting systems; use of rainwater and grey water. Effects on floor plan and drafting

Recommended literature

Energy-Optimised Construction II:

Lecture notes

Literature list to complement study contained in these notes

Building Services II:

Wolfram Pistohl, Handbuch der Gebäudetechnik, Vol. 1+2, Düsseldorf 2013

Forms of teaching and study

Energy-Optimised Construction II: 2 CPs, lectures / exercises (2 WHS)

Building Services II: 3 CPs, lectures / exercises (3 WHS)

Examination(s)

Precondition(s) for examination

Examination type

Energy-Optimised Construction II: Extended essay
Building Services II: Extended essay

Examination duration (for written/oral examinations)

Calculation of module grade

Energy-Optimised Construction II: Grade from extended essay (40%)

Building Services II: Grade from extended essay (60%)

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)
Successful participation in Physics + Technology I (recommended preparation)
Module application / admission requirements for further modules (mandatory or recommended)
Module frequency
Annual
Language of instruction
German
Last update: 31/08/2017

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-404	Architectural Sociology	MM	4	Prof. Dr. Weresch

Department	Duration
Humanities and Social Sciences	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
2.5 CPs (= 75 hour workload)	2 WHS (= 21 contact hours)	108 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)
<ul style="list-style-type: none"> • Ability to analyse the interrelations between architecture and people and between society and constructed space • To learn scientific working techniques to analysis the interdependencies of society and space
Module content
<ul style="list-style-type: none"> • The lectures and seminars address the long-term societal evolution of family living and housing construction as well as the spatial requirements of modern families • Investigation into demographic change and new living requirements of elderly citizens, and consequences of the same • Analysis of the new societal group of 'singles' and their spatial requirements • The knowledge gained serves as a basis for drafting
Recommended literature
Elias, Norbert (1979): The Court Society. 4th edition. Dublin: University College Dublin Press. (Chapters I and III.); Weresch, Katharina (2015): Architecture, Civilization, Gender: Residential Building, the Civilising Process of Dwelling Practices and Changes in the Family. 1st edition. Zürich: Lit. Verlag; Weber-Kellermann, Ingeborg (1989): Die Kindheit. Kleidung und Wohnen, Arbeit und Spiel ; eine Kulturgeschichte. 1st edition. Frankfurt am Main: Insel-Verlag
Forms of teaching and study
Architectural Sociology: 2.5 CPs, seminars and lectures (2 WHS)

Examination(s)

Precondition(s) for examination	
Successful active participation (min. 80%) in seminars — compulsory attendance	
Examination type	Examination duration (for written/oral examinations)
Presentation / assignments / extended essay	
Calculation of module grade	
Grades from presentation / assignments / extended essay (100%)	

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)
None
Module application / admission requirements for further modules (mandatory or recommended)
Module frequency
Annual
Language of instruction
German
Last update: 20/03/2017

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-405	Construction Economics I	MM	4	Prof. Johrendt

Department	Duration
Construction Economics and Building Law	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	4 WHS (= 42 contact hours)	108 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Principles of Construction Economics:

Fundamental understanding of:

- work steps before the project idea
- the typical sequence of construction projects
- the interaction of participating actors in the various project phases
- objectives and conflicting objectives in the construction industry

Principles of Cost Planning:

An understanding of:

- cost-effectiveness and cost management as a universal cycle in the project cycle of planning, construction and use
- active cost management as a tool in the drafting and construction process

A command of

- the fundamental skills in cost planning in all planning and project phases

Expertise in the

- active establishment, development and fulfilment of construction project requirements with regard to the aspects of cost-effectiveness and cost management

Module content

Principles of Construction Economics:

- Lectures on the principles of construction economics
- Planning and construction process / actors in planning, construction and use phases / planning operations (HOAI and BWL)
- Cost-effectiveness / costs in the construction industry / usage costs / purchase of construction services
- Ecological assessment / property and investment

Principles of Cost Planning:

- Principles, steps and methodology of cost planning
- Individual and overall cost-effectiveness / interaction of planning and cost-effectiveness

Recommended literature

Varying

Forms of teaching and study

Principles of Construction Economics: 2.5 CPs, seminars and lectures (2 WHS)

Principles of Cost Planning: 2.5 CPs, seminars and lectures (2 WHS)

Examination(s)

Precondition(s) for examination

Regular, active participation (min. 80%) in seminars – compulsory attendance

Examination type

Examination duration (for written/oral examinations)

Written examination / assignments / extended essay

Calculation of module grade

Principles of Construction Economics: Grades from written examination / assignments / extended essay 50%

Principles of Cost Planning: Grades from written examination / assignments / extended essay 50%

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Module application / admission requirements for further modules (mandatory or recommended)

Module frequency

Annual

Language of instruction

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-501	Drafting Project	MM	5	Prof. Sill Prof. Dr. Staffa

Department	Duration
Design and Drafting	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
10 CPs (= 300 hour workload)	4 WHS (= 42 contact hours)	258 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

- To understand complex architectonic and urban development issues and their diverse interconnections in urban, metropolitan space.
- To perceive and interpret the conceptual formulation
- To recognise conceptual drafting strategies

Module content

Complex drafting tasks and architectonic issues with conceptual focus and theoretical discourse. This occurs on the basis of current topics that illustrate the relationship of architecture and urban space, architecture and landscape and the respective societal context.

- Participation in the objectives of a drafting task
- Regular plenum events
- Thematically oriented excursions
- Collaborations with other disciplines at HCU and other higher education institutions, with some international networks
- Collaborations with external institutions
- Completed project with presentation and documentation
- Depiction and presentation of drafting, thinking and cognitive processes within the project in the form of a portfolio
- Project presentation using drawings, models and digital media as well as representation of connection to the conceptual-theoretical approach

Recommended literature

Varying

Forms of teaching and study

Drafting project – Interdisciplinary project: 10 CPs, project / seminars / lectures (4 WHS)

Examination(s)

Precondition(s) for examination

Examination type

Semester essay / presentation

Examination duration (for written/oral examinations)

Calculation of module grade

Grades from extended essay / presentation (100%)

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Formal:

- From Department 1: Drafting I – III completed
- From Department 2: Construction + Technology I – III completed

Content:

Knowledge of interdependencies of constructional drafting, support structures, building physics, building materials, building services, law and economics, and their impact on overall drafting through to detail development.

Module application / admission requirements for further modules (mandatory or recommended)

Module frequency

Annual

Language of instruction

German

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-502	City and Landscape	MM	5	Prof. Sörensen

Department	Duration
Design + Drafting	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	4 WHS (= 42 contact hours)	108 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Landscape:

- To acquire knowledge of the functional, socio-economic, ecological, cultural and aesthetic interrelations of city and outdoor space
- To gain awareness of the significance of inner-city open spaces as part of architectonic practice
- To gain an understanding of urban development issues and matters of cultural and aesthetic landscape design as part of an overarching design practice.
- To address concepts of large-scale connections, such as territorial, urban and open space forms, structures and patterns within urban cultural landscapes, etc.
- To evaluate potentials and deficits for a development project, and transform analysis into a drafting approach
- To learn presentation methods in urban and landscape planning, and convey knowledge gained in legible documentation

City:

The students gain a fundamental understanding of urban development issues and matters of cultural and aesthetic landscape design as part of an overarching design practice. They acquire knowledge of the theoretical principles of landscape aesthetics and perception. They become able to conceptually process large-scale connections, such as territorial, urban and open space forms, structures and patterns within urban cultural landscapes. They learn the methodological fundamentals to analyse and evaluate potentials and deficits for complex projects. The students must develop the ability to develop a drafting approach from this analysis.

Module content

Joint lecture on city and landscape, parallel seminars with exercises on city or landscape

- Site analyses with various means of documentation (photography, video, cartography, topographical models, etc.)
- Conveyance and application of analytical methods with a variety of focuses
 - Urban and natural principles (different layers, topographical, historical, landscape traces)
 - Historical research and systematic comparison of the current situation (landscape change, cultural changes, overlays)
- Differentiation according to spatial use specifications (incl. traffic and development)
- Conditions of public space in the context of social diversity and dynamics

Consolidation:

Fundamentals of the social, functional and aesthetic significance of space and its construction, site analyses with various means of documentation (incl. photography, video, cartography, topographical models), conveyance and application of analytical methods with various focuses: urban and natural principles (different layers: topographical, historical, landscape traces), historical research and systematic comparison with the current situation (landscape change, cultural changes, overlays), differentiation according to spatial use specifications (incl. traffic and development), conditions of public space in the context of social diversity and dynamics, transformation of the analysis into a drafting approach, presentation methods in urban and landscape planning, conveyance and processing of analysis and transformation processes in sound documentation.

Recommended literature

Varying

Forms of teaching and study

Lectures on City + Landscape: 2.5 CPs, lectures (2 WHS)

Exercises for City or Exercises on Landscape: 2.5 CPs, lectures and exercises (2 WHS)

Examination(s)

Precondition(s) for examination

Regular, active participation (min. 80%) in exercises

Examination type

Examination duration (for written/oral examinations)

Documentation / assignments / extended essay / presentation

Calculation of module grade

Lectures on City + Landscape: (ungraded)

Exercises on City or Exercises on Landscape: Grades from documentation / assignments / extended essay / presentation (100%)

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Recommended preparation: Successful completion of the City and Space modules

Module application / admission requirements for further modules (mandatory or recommended)

Module frequency

Annual

Language of instruction

German

Last update: 20/03/2017

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-503	History and Theory of Architecture III	MM	5	Prof. Dr. Düwel

Department	Duration
Humanities and Social Sciences	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
2.5 CPs (= 75 hour workload)	2 WHS (= 21 contact hours)	54 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Learning outcomes:

Deepened understanding of aspects of the history of architecture and urban space. Improved understanding of methods of the critical analysis of architecture and urban development. Improved knowledge of the development of architecture and urban space in various epochs, as well as the specialist terminology required for a thorough understanding and ability to grade and classify buildings.

Competences:

Enhanced skills to assess and analyse historic developments and qualities in the built environment. Ability to reflect independently on aspects of architecture and urban development in their respective cultural and societal context.

Module content

Methodological fundamentals comprise description, comparison, scientific analysis and historical-critical evaluation. Societal, political, cultural, architectural, urban planning and formal aesthetic aspects from a variety of eras are incorporated in the evaluation in order to achieve a reflective perception of our complex built environment.

Architectural theory is presented as an integral component of architectural history, as it cannot be applied absolutely but rather within temporal context. As the history of constructional ideas, architectural theory does not exist "alongside" buildings but instead always applies to a real-life historical context.

Conveyance of fundamental knowledge of the history of architecture and urban development with focuses on the 19th and 20th century.

Recommended literature

Klaus Jan Philipp, Das Reclam Buch der Architektur, Stuttgart 2006; Leonardo Benevolo, The History of the City, Rhode Island, USA 2000; Nikolaus Pevsner, An Outline of European Architecture, 3rd edition, London 2009.

Forms of teaching and study

History and Theory of Architecture III: 2.5 CPs, lectures (2 WHS)

Examination(s)

Precondition(s) for examination

Examination type

Written examination / assignments / extended essay

Examination duration (for written/oral examinations)

min. 20 minutes

Calculation of module grade

Grades from written examination / assignments / extended essay (100%)

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Recommended preparation is successful participation in HTA I and HTA II

Module application / admission requirements for further modules (mandatory or recommended)

Module frequency

Annual

Language of instruction

German

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-504	Construction Economics II	MM	5	Prof. Johrendt

Department	Duration
Construction Economics and Building Law	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	4 WHS (= 42 contact hours)	108 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Construction and Planning Services in the Market Economy:

To acquire an understanding of the principles of entrepreneurial and microeconomic aspects of architectural activities in the market economy. To help students to find their place as an architect in the professional sphere.

Planning and Construction Management:

To gain an understanding of ideal preparation for realisation of construction projects through planning. To gain and understanding of the individual steps by which to implement planning concepts in practical construction with construction companies. To acquire basic skills for planning and performing construction services.

Module content

Construction and Planning Services in the Market Economy:

- Principles of cost-effectiveness for an architectural practice
- Principles of remuneration for architectural services
- Principles of purchasing planning and construction services

Planning and Construction Management:

- The planning and construction process
- Conflicting objectives in the construction industry
- Interaction of planning, organisation and optimisation
- Process organisation models
- Recording, evaluating and controlling a manageable project, from project development and all planning phases through to construction site monitoring

Recommended literature

Varying

Forms of teaching and study

Construction and Planning Services in the Market Economy: 2.5 CPs, seminars and lectures (2 WHS)

Planning and Construction Management: 2.5 CPs, seminars and lectures (2 WHS)

Examination(s)

Precondition(s) for examination

Regular, active participation (min. 80%) in seminars – compulsory attendance

Examination type

Examination duration (for written/oral examinations)

Written examination / presentation / assignments / extended essay

Calculation of module grade

Construction and Planning Services in the Market Economy: Grades from presentation / written examination / assignments / extended essay 20%

Planning and Construction Management: Grades from written examination / assignments / extended essay 80%

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Module application / admission requirements for further modules (mandatory or recommended)

Module frequency

Annual

Language of instruction

German

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-505	Building Law	MM	5	Prof. Johrendt

Department	Duration
Architecture	2 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	4 WHS (= 42 contact hours)	108 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Private Building Law:

- To gain an understanding of the principles of private building law (contract law and legal performance standards)

Public Building Law:

- To gain an overview of the key principles and objectives of public building regulations
- To gain a sound understanding of the principles of building law
- To be able to apply public building law in a legally watertight manner in order to conduct sustainable, approvable planning work for specific building constructions
- To be able to derive legally watertight limits and exploit the permissible development potential for a specific project

Module content

Private Building Law:

- Principles of law and legal systems
- Introduction to contract law
- Contracts for work and services
- Terms and conditions
- Provisions of the Awarding and Contracting Ordinance for Construction Services, Part B (VOB/B); Provisions of the Fee Structure for Architects and Engineers (HOAI)

Public Building Law:

- Basics, contents and legal requirements of formal and material building regulations
- Analysis of site-specific evaluations and regulatory objectives of building law regulations
- Identifying and carving out legal possibilities to creatively exploit specific development opportunities through derogation, exemption and other similar requests
- Work on case studies in relation to e.g. neighbouring rights, fire protection, etc.
- Application and consolidation of knowledge through work on a fictional planning order as a semester exercise

Recommended literature

Varying

Forms of teaching and study

Private Building Law: 2.5 CP, seminars / lectures (2 WHS)

Public Building Law: 2.5 CP, seminars / lectures (2 WHS)

Examination(s)

Precondition(s) for examination

Regular, active participation (min. 80%) in seminars – compulsory attendance

Examination type

Examination duration (for written/oral examinations)

Private Building Law / Public Building Law:

Written examination / assignments / extended essay

Calculation of module grade

Private Building Law: Grades from written examination / assignments / extended essay (40%)

Public Building Law: Grades from written examination / assignments / extended essay (60%)

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Module application / admission requirements for further modules (mandatory or recommended)

Module frequency

Annual

Language of instruction
German
Last update: 04/09/2017

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-601	Bachelor Thesis: Project	MM	6	Prof. Sill Prof. Dr. Staffa

Department	Duration
Thesis	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
10 CPs (= 300 hour workload)		300 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Bachelor's Thesis:

In the Bachelor's thesis, students should demonstrate that they are capable of handling a problem from an architect's scientific, application-oriented or professional field of activity and, in so doing, classify the interdisciplinary interdependencies.

Range of assignments:

- Complex drafting tasks and architectonic issues with conceptual focus and theoretical discourse
- or
- complex theoretical work on architectonic issues, or
 - complex empirical work on architectonic issues, or
 - complex experimental work on architectonic issues, or
 - a combination of the aforementioned areas

The turnaround time is 12 weeks with a subsequent exhibition and presentation

The limited turnaround time trains the students to work quickly to perceive and interpret the task, to be flexible and conduct topic-oriented analysis and concept synthesis, thereby preparing the students for further, more intense study in a Master's degree.

Module content

- Students independently work on the drafting and/or theoretical and/or empirical and/or experimental assignment set
- Accompanying seminars on the topic or accompanying guidance in one-on-one or group sessions and plenum events, in which the students can present their progress and discuss their results to date with the supervising member of staff
- Depiction and presentation of drafting, thinking and cognitive processes within the project in the form of a portfolio
- Completed project work with presentation, exhibition and documentation
- Presentation of the results of the the drafting and/or theoretical and/or empirical and/or experimental work using analogue and digital media as appropriate for the assignment, including presentation of connections with conceptual-theoretical excursus
- Drafting presentation using drawings or models and digital media as well as representation of connection to the conceptual-theoretical approach

Recommended literature

Varying

Forms of teaching and study

Bachelor Thesis: 10 CPs, thesis

Further information: See HCU homepage for information on the Bachelor's thesis

Examination(s)

Precondition(s) for examination

Examination type

Thesis and presentation
Submission form: 2 digital copies on suitable storage media

Examination duration (for written/oral examinations)

Turnaround time: 12 weeks

Calculation of module grade

Thesis grade 75%, presentation grade 25%

The gradings from the first and second markers are both given equal weighting

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)	
Module application / admission requirements for further modules (mandatory or recommended)	
Module frequency	
Every semester	
Language of instruction	
German	
	Last update: 26/04/2017

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-602	Elective Modules I	MM	6	Prof. Sill Prof. Dr. Staffa

Department	Duration
Elective Modules	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	4 WHS (= 42 contact hours)	108 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Mandatory Elective from the range of Architecture courses:

- To conduct in-depth scientific, disciplinary and interdisciplinary examination of topic areas and topics from the full course range of all disciplines within the Architecture degree programme
- To reinforce specialist skills and the ability to work on complex tasks in an integrated manner
- To reinforce students' ability to work scientifically on problems set, including public presentation of the results

Module content

Varying in-depth teaching content and supplementary topics from the entire teaching range of the Architecture degree programme as a catalogue, tailored to the respective topics and focuses during the semester.

Recommended literature

Varying

Forms of teaching and study

Mandatory Elective from the range of Architecture courses: 2.5 CPs, seminars (2 WHS)

Mandatory Elective from the range of Architecture courses: 2.5 CPs, seminars (2 WHS)

Examination(s)

Precondition(s) for examination

Successful active participation (min. 80%) in seminars — compulsory attendance

Examination type

Examination duration (for written/oral examinations)

Presentation / assignments / extended essay / written examination

Calculation of module grade

Mandatory Elective from the range of Architecture courses: Grades from presentation / assignments / extended essay / written examination (50%)

Mandatory Elective from the range of Architecture courses: Grades from presentation / assignments / extended essay / written examination (50%)

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Module application / admission requirements for further modules (mandatory or recommended)

Module frequency

Annual

Language of instruction

German

Last update: 20/03/2017

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-603	Elective Modules II	MM	6	Prof. Sill Prof. Dr. Staffa

Department	Duration
Elective Modules	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	4 WHS (= 42 contact hours)	108 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Mandatory Elective from the range of Architecture courses:

- To conduct in-depth scientific, disciplinary and interdisciplinary examination of topic areas and topics from the full course range of all disciplines within the Architecture degree programme
- To reinforce specialist skills and the ability to work on complex tasks in an integrated manner
- To reinforce students' ability to work scientifically on problems set, including public presentation of the results

Analogue and Digital (2 'digital' of 1.25 CPs each)

(Skills: Analysis and visualisation instruments)

Module content

Varying in-depth teaching content and supplementary topics from the entire teaching range and skills contained in the Architecture degree programme as a catalogue, tailored to the respective topics and focuses during the semester.

Recommended literature

Varying

Forms of teaching and study

Mandatory Elective from the range of Architecture courses: 2.5 CPs, seminars (2 WHS)

Analogue and Digital (2 'digital' of 1.25 CPs each): 2.5 CPs, seminars/exercises (2 WHS)

Examination(s)

Precondition(s) for examination

Examination type

Examination duration (for written/oral examinations)

Mandatory Elective from the range of Architecture courses: Presentation / assignments / extended essay / written examination

Analogue and Digital (2 'digital' of 1.25 CPs each): Documentation / extended essay / assignments

Calculation of module grade

Mandatory Elective from the range of Architecture courses: Grades from presentation / assignments / extended essay / written examination (50%)

Analogue and Digital (2 'digital' of 1.25 CPs each): Grades from documentation / extended essay / assignments 50%

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Module application / admission requirements for further modules (mandatory or recommended)

Module frequency

Annual

Language of instruction

German

Module number	Module name	Module type (MM/RE/OE)	Semesters of study (recommended)	Module organiser
ARC-B-Mod-604	Improvisation	MM	6	Prof. Sill Prof. Dr. Staffa

Department	Duration
Elective Modules	1 semester

CPs (according to ECTS)	Weekly hours per semester (WHS)	Self-study
5 CPs (= 150 hour workload)	2 WHS (= 21 contact hours)	129 hours

Objectives and content

Module qualification objectives (targeted learning outcomes)

Improvisation 1–4:

- Compressed drafting assignments from all areas of architecture have to be understood, interpreted and brought to a sound, convincing conclusion within a limited period of time (usually 1 to 14 days)
- Improvised drafts produced at short notice can be incorporated in a student competition to practice jury-oriented presentation
- Potential collaborations with tasks from external institutions, individuals and groups involved in construction should enhance practical relevance
- Students practice working on topics from neighbouring disciplines in the concept stage
- Concise presentation of concept and content on the basis of drawings and models as well as a speech and discussion on the draft are part of the highly compressed final presentation

Module content

- Compressed drafting assignments from all areas of architecture and neighbouring disciplines
- Drafting within a confined time limit [usually 7–14 days]

Recommended literature

Varying

Forms of teaching and study

Improvisation 1–4: each 1.25 CPs, improvised tasks (0.5 WHS)

Examination(s)

Precondition(s) for examination

Examination type

Improvisation

Examination duration (for written/oral examinations)

Calculation of module grade

Improvisation 1–4 Each improvisation assignment counts for 25% of final grade

Supplementary information

Required knowledge / precondition(s) for participation (in form and content)

Module application / admission requirements for further modules (mandatory or recommended)

Module frequency

Annual

Language of instruction

German

Last update: 20/03/2017