

Module Handbook

Architecture | Building Revitalization and Transformation

(Architektur | Bauen mit Bestand)

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

Master of Science (M.Sc.)

IMPORTANT

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

MODULES AND COURSES

Designing with the Existing	1
Designing with the Existing: Transformations.....	2
Designing with the Existing: Design Techniques.....	3
Elective Module: Building Construction.....	4
Historical Structural Design.....	5
CAD and Building Conservation.....	6
Construction Documentation/Building Research	7
urban.research.....	8
Basics of Lighting and Lighting Planning.....	9
Historical Buildings Today.....	10
Workshop International	11
Architectural Practice.....	12
Design Methodology	13
Historical Urban Development.....	14
Presenting.....	15
Steel Construction.....	16
Interdisciplinary Field Trip – Preparatory Seminar	17
50's Revisited – Housing Development of the Post-War Modernism Era.....	18
Digital Advanced	19
Material Sample.....	20
Design Ad Hoc.....	21
3 x Designing with the Existing	22
Selected Chapters of Architectural History	23
Field Trip – Designing with the Existing	24
Interdisciplinary Field Trip – Field Trip.....	25
Spatial Experiments.....	26
House Archive.....	27
Model Making.....	28
Room Simulation – Building with Light	29
Academic Research and Writing	30
Inventory of Buildings.....	31
Cultural Landscape Preservation	32

Fairfaced Concrete Constructions	33
Industry Workshop	34
Master's Thesis	35
Colloquium.....	37
Academic Studies: Master's Thesis.....	38
Master's Thesis Architecture Building Revitalization and Transformation.....	39
Design Studio D: Paste.....	40
Paste: Design Studio D.....	41
Academic Studies D: Paste	42
Paste: Design Strategy	43
Paste: Existing City and Building Typologies	44
Design Studio B: Adding	45
Adding: Design Studio B	46
Academic Studies B: Adding	47
Adding: Design Strategy	48
Adding: Building Construction.....	49
Design Studio C: Transformation.....	50
Transformation: Design Studio C	51
Academic Studies C: Transformation	52
Transformation: Design Strategy	53
Transformation: Energy and Building Services	54
Design Studio A: Preserve.....	55
Preserve: Design Studio A	56
Preserve: Construction	57
Academic Studies A: Preserve.....	58
Preserve: Project Development.....	59
Preserve: Design Strategy Cultural Heritage and Preservation	60

Module Title	Designing with the Existing
Module Title (German)	Einführen in das Bauen mit Bestand
Code	M-100
Language of Instruction	German
Recom- mended Se- mester(s)	1
Module offe- red in	Every semester
Competen- cies	<p>Subject-specific and methodological competencies and skills (Knowledge and understanding as well as applying and generating knowledge)</p> <p>The module provides the appropriate knowledge for:</p> <ul style="list-style-type: none"> • the ability to create architectural designs that meet both aesthetic and technical requirements • understanding the relationship between people and buildings and between buildings and their environment and understanding the necessity of relating buildings and the spaces between them to human needs and standards • understanding the methods used to review and develop plans for design projects, in particular for planning tasks involving existing buildings <p>Other competencies and skills (Communication and cooperation)</p> <p>The acquisition of other competencies and skills is integrated into the module</p>
Credit Points	4 CP
Module Cour- ses	Designing with the Existing: Transformations Designing with the Existing: Design Techniques

Course Title	Designing with the Existing: Transformations
Course Title (German)	Einführung: Transformationen
Language of Instruction	German
Recommended Semester(s)	1
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> The course aims to raise awareness of the specific problems involved in dealing with existing structures and requires the ability to form an individual opinion concerning pragmatic and programmatic questions.
Topics/Course Contents	<ul style="list-style-type: none"> The transformation lecture offers an overview of the different strategies and approaches involved in designing with the existing. On the basis of outstanding examples, both the architectural discourse and practice-oriented implementation will be discussed.
Credit Points	2 CP
Module	Designing with the Existing

Course Title	Designing with the Existing: Design Techniques
Course Title (German)	Einführung: Planungstechniken
Language of Instruction	German
Recommended Semester(s)	1
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> The students acquire competences in further planning techniques for planning tasks in existing buildings related to the competences previously acquired during the bachelor's degree program.
Topics/Course Contents	<ul style="list-style-type: none"> Special features of planning stages HOAI 1-8 for existing buildings, in particular: analysis and survey of existing buildings, conceptual design, planning of building permits, tendering and award of contracts as well as construction supervision
Credit Points	2 CP
Module	Designing with the Existing

Module Title	Elective Module: Building Construction
Module Title (German)	Wahlpflichtmodul: Bauen mit Bestand
Code	W
Language of Instruction	German, English
Recom- mended Se- mester(s)	1
Module offe- red in	Every semester
Competen- cies	<p>Subject-specific and methodological competencies and skills (Knowledge and understanding as well as applying and generating knowledge)</p> <p>The elective subjects enable students to extend their skills and competences according to inclination or interests. According to the requirements of the Federal Chamber of Architects, the elective subjects are assigned to the following module groups:</p> <ul style="list-style-type: none"> • Design and building theory • General studies • Technical sciences • Visual representation and design <p>Other competencies and skills (Communication and cooperation)</p> <p>The acquisition of other competencies and skills is integrated into the module</p>
Credit Points	14 CP
Module Courses	<p>The range of electives on offer is continuously updated and can therefore vary from semester to semester.</p> <p>The respective current range is published in the annotated course catalog.</p>

*The range of electives on offer is continuously updated and can therefore vary from semester to semester.

The respective current range is published in the annotated course catalog

Course Title	Historical Structural Design
Course Title (German)	Historische Tragkonstruktion
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Summer semester only
Competencies/Learning Objectives	The students acquire skills in dealing with structural and constructional problems in connection with renovation, reconstruction, and extension of existing buildings.
Topics/Course Contents	<ul style="list-style-type: none"> • Scientific analysis and understanding the structural design of existing buildings, taking into account the particularities of their time of construction • Planning techniques in the design and construction planning of retrofitting, renovation, reconstruction, and extension of structures to adapt them to current standards and requirements as well as new conditions of use
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	CAD and Building Conservation
Course Title (German)	CAD in der Denkmalpflege
Language of In- struction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Compenten- cies/Learning Objectives	<ul style="list-style-type: none"> Familiarization with qualitative and quantitative requirements of CAD drawings for the accurate visual representation of heritage buildings. Ability to evaluate the 2D and 3D tools of existing CAD software with regard to the visual representation tasks in building conservation.
Topics/Course Contents	<ul style="list-style-type: none"> Existing requirements for a CAD drawing created in the context of building conservation (accurate object description) Presentation of the necessary software functionalities and exemplary presentation of existing software solutions
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Construction Documentation/Building Research
Course Title (German)	Baudokumentation/Bauforschung
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Knowledge of different methods of building documentation • Detailed knowledge of tachymetric building surveys • Creating detailed plans of a historical building
Topics/Course Contents	<ul style="list-style-type: none"> • Surveying, drawing, and evaluating a selected, historically interesting building or ensemble of buildings as a block seminar • Graphic analysis of the survey and preparation of ground plans, views, and cross-sections • Preparation of photographic documentation
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	urban.research
Course Title (German)	urban.research
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Students acquire knowledge of theoretical and methodological models of urban design. • Analysis of important texts, their evaluation and categorization in the context of the specialist discourse
Topics/Course Contents	<ul style="list-style-type: none"> • L'architettura della citta (Rossi) • Die Stadt in der Stadt (Ungers) Collage City (Rowe) • Learning from Las Vegas (Venturi) and others
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Basics of Lighting and Lighting Planning
Course Title (German)	Grundlagen der Licht- und Beleuchtungsplanung
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Learning basic concepts and aspects of lighting design • Raising awareness for the connections between visual perception, light, and space
Topics/Course Contents	<p>In order to qualify the students for dialogs with specialist planners and within the context of lighting technology as an integral part of architecture, the following topics are dealt with:</p> <ul style="list-style-type: none"> • Physics of light • Lamps and light • Quantitative design criteria / light dimensioning • Daylight control • New lighting technologies • Lighting applications
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Historical Buildings Today
Course Title (German)	Historische Bauten heute
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Students familiarize themselves with and evaluate historical buildings and their qualities. • Initiation of a personal discourse as a prospective architect in the area of conflict between existing cultural values and the planning tasks that arise.
Topics/Course Contents	<ul style="list-style-type: none"> • Historical buildings, especially from the region, are presented. • Exemplary architectural solutions in dealing with existing historical buildings are highlighted.
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Workshop International
Course Title (German)	Workshop International
Language of Instruction	English
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Rapid elaboration and presentation of a design idea in an international context • Joint work with international teachers and, depending on the course, also students • Intercultural competence
Topics/Course Contents	<p>Multi-day workshop with international lecturers. Workshops take place both in Wiesbaden and as excursions to other universities and countries. The content in each case is a small design task, which has to do with the location / the lecturers.</p> <p>Examples of previous workshops with excursions:</p> <ul style="list-style-type: none"> • Workshop Vienna (Urban Quarters) • Several in Sharjah, United Arab Emirates (Public Spaces, Panel Fabrication, Sand Shapes, etc.) • Suzhou, China (Urban Parasites) <p>Examples of previous workshops in Wiesbaden:</p> <ul style="list-style-type: none"> • Shaping Light (Prof. Nancy Cheng, Oregon) • Emergency Shelter (Sen. Lect. Jeremy Ham, Australia) • Folding Structures (Prof. Martin Bechtold, Harvard)
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Architectural Practice
Course Title (German)	ArchitekturPraxis
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Selected practice topics in the architectural office based on current projects of local offices • Insight into everyday tasks and approaches of architects
Topics/Course Contents	<ul style="list-style-type: none"> • Visit to / lectures by experts (e. g. fire protection, building law authorities) and insight into their work • Exemplary development of solutions in the respective specialist fields on the basis of current projects
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Design Methodology
Course Title (German)	Entwurfsmethodik
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Analysis and documentation of typologically significant buildings based on different design methods • Identification of theoretical and methodological basic principles of design theory and their application in the design process
Topics/Course Contents	<ul style="list-style-type: none"> • Dealing with basic design strategies on a theoretical and design level
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Historical Urban Development
Course Title (German)	Historische Stadtentwicklung
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Analysis of historical contexts in construction • Architecture and building culture in smaller urban spaces, districts, or entire cities • Extended knowledge of the history of building and urban development • Learning to carry out independent scientific work
Topics/Course Contents	<ul style="list-style-type: none"> • Students work on a research topic of their own choice, within the framework of a superordinate question on urban issues. • Investigations of and in cities from antiquity to modern times
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Presenting
Course Title (German)	Präsentieren
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Presenting own ideas, concepts, and projects • Basics of communication • Structured explanation of ideas, concepts, and projects
Topics/Course Contents	<ul style="list-style-type: none"> • Presenting and communicating own (design) ideas, concepts, and projects • Structuring presentations • Dealing with and coping with nervousness in presentations • Discovering and developing own presentation skills using practical exercises
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Steel Construction
Course Title (German)	Stahlbau
Language of In- struction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every year
Competen- cies/Learning Objectives	<ul style="list-style-type: none"> • Special features when designing with the material steel • Extended knowledge of structural and constructional processes in connection with the material steel
Topics/Course Contents	<ul style="list-style-type: none"> • Students acquire design and construction skills. • History of steel construction, structural principles, typical structural design constructions, semi-finished steel products, cast steel, special steel constructions, steel composite constructions, fire protection in steel construction, production techniques, special technologies • Seminar presentations on selected examples impart further knowledge of the architectural impact and the technology of building with structural steel constructions. A complementary excursion completes the seminar.
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Interdisciplinary Field Trip – Preparatory Seminar
Course Title (German)	Exkursion Interdisziplinär – Vorbereitendes Seminar zur Studienfahrt
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every year
Competencies/Learning Objectives	Students gain new perspectives on contemporary and historical architecture, urban planning, art and design and their perception. They acquire further skills to classify architecture, city, art, and design and to develop and reflect on their own point of view.
Topics/Course Contents	Analysis of current and historical examples of architecture, urban planning, art, and design. Preparatory review of the examples to be visited during the excursion.
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	50's Revisited – Housing Development of the Post-War Modernism Era
Course Title (German)	50's revisited – Der Wohnungsbau der Nachkriegsmoderne
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Analysis and documentation of typologically significant buildings and building ensembles from the period of post-war reconstruction • Identification of basic theoretical and methodological principles of housing construction and exploration of their future possibilities to adapt existing residential housing to demographic and societal change
Topics/Course Contents	<ul style="list-style-type: none"> • Students carry out independent research of buildings and building ensembles and their special typological features within the respective period of construction. • On-site inspection as part of the excursion
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Digital Advanced
Course Title (German)	Digital Advanced
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • In-depth knowledge of digital special topics • Spanning the whole range from visualization and simulation to production
Topics/Course Contents	<ul style="list-style-type: none"> • Digital special topics, depending on current trends
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Material Sample
Course Title (German)	Materialprobe
Language of In- struction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every year
Competen- cies/Learning Objectives	<ul style="list-style-type: none"> • In-depth knowledge of materials for architecture
Topics/Course Contents	<ul style="list-style-type: none"> • Extensive knowledge of materials is necessary to translate a design into built architecture. • The acquired basic knowledge on materials from the lectures Material Science 1 and 2 are expanded in this seminar. For this purpose, material properties are researched, material samples are created, and possible applications are documented.
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Design Ad Hoc
Course Title (German)	Stegreifentwurf
Language of In- struction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competen- cies/Learning Objectives	The necessity of making a quick decision on a design concept sharpens the students' skills of judgement. Problems are inevitably reduced to the essential points. Insignificant aspects are recognized as such. Due to the wide variety of fundamentally different tasks during their studies, the students cannot stick to a standard procedure but are forced to constantly review and expand their formal repertoire.
Topics/Course Contents	Due to the necessity of conveying the essence of a design idea within a short period of time, each student develops their own appropriate presentation method. Personal creativity knows no bounds in terms of diagrams, perspective sketches, interior views, models and much more.
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	3 x Designing with the Existing
Course Title (German)	3 x Bauen mit Bestand
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Ability to create architectural designs for existing buildings that meet both aesthetic and technical requirements • Understanding the methods used to review and revise the design for a design project with existing buildings • Analysis of historical buildings, their evaluation and classification
Topics/Course Contents	<ul style="list-style-type: none"> • Planning and design techniques in construction with existing structures based on three practical projects
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Selected Chapters of Architectural History
Course Title (German)	Ausgewählte Kapitel der Baugeschichte
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Historical references within a period of architectural history • Analysis of historical buildings, their evaluation and classification
Topics/Course Contents	<ul style="list-style-type: none"> • Introduction to the methodology of architectural history research • Analysis of historical buildings on site and in literature
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Field Trip – Designing with the Existing
Course Title (German)	Exkursion – Bauen mit Bestand
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Summer semester only
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Ability to critically analyze and document historical buildings and building ensembles and their extension, reconstruction, and renovation • Application of scientific and social findings in own independent evaluation of historical buildings
Topics/Course Contents	<ul style="list-style-type: none"> • Own independent research of buildings and building ensembles and their extension, reconstruction, and renovation, primarily since 1870 • On-site inspection as part of the excursion
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Interdisciplinary Field Trip – Field Trip
Course Title (German)	Exkursion Interdisziplinär – Studienfahrt im Spektrum von Architektur, Kunst und Design
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every year
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Discovering new perspectives on contemporary and historical architecture, urban planning, art and design and their perception • Acquiring further skills for the classification of architecture, city, art, and design and for the development and reflection of one's own point of view
Topics/Course Contents	<ul style="list-style-type: none"> • Joint inspection and analysis of contemporary and historical examples from architecture, urban planning, art, and design on site • Documentation and reflection of the inspected architecture
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Spatial Experiments
Course Title (German)	Raumexperimente
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every year
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Specialized technical and experimental creation and design of space • Own independent application of creative and conceptual competences and reflection on these
Topics/Course Contents	<ul style="list-style-type: none"> • Experimental approaches to the generation and formulation of spatial qualities depending on material and methodology • Analysis of formal principles, structures, and systems from various fields • Further development of own approaches and means of expression, especially in the construction of models
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	House Archive
Course Title (German)	HausArchiv
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Winter semester only
Competencies/Learning Objectives	<ul style="list-style-type: none"> • In-depth analysis of historical buildings, their classification, documentation, and evaluation • Application of scientific and social findings in own independent analysis and evaluation of historical buildings
Topics/Course Contents	<ul style="list-style-type: none"> • Own independent research of buildings since 1870 • Selection of typical examples of buildings built during the construction period • Photographic documentation • Scientific and social findings for the analysis and evaluation of historical buildings
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Model Making
Course Title (German)	Modellbau
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Ability to build and design complex architectural models that meet relevant aesthetic and design requirements • Own independent application of the methods to represent and complement the design process • Ability to critically reflect and evaluate one's own models
Topics/Course Contents	<ul style="list-style-type: none"> • Model building techniques • Model building materials for architectural modelling, conceptual model building techniques, basic tools/tool techniques, computer-aided model making
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Room Simulation – Building with Light
Course Title (German)	Raumsimulation – Bauen mit Licht
Language of In- struction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competen- cies/Learning Objectives	<ul style="list-style-type: none"> • Since the classical means of presenting architecture do not fully do justice to the phenomenon of light, students develop a "catalog of experience" through observation (viewing built examples) and empirical experiments (experiments in the lighting laboratory) from which conclusions can be drawn by analogy for their own work.
Topics/Course Contents	<ul style="list-style-type: none"> • The quantitative and qualitative aspects of light and its creative potential are dealt with on the basis of a variety of topics.
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Academic Research and Writing
Course Title (German)	Wissenschaftliches Arbeiten für Architekten
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Development of scientific questions • Classification of an established phenomenon / context • Integration into research literature • Knowledge of how to prepare a scientific text
Topics/Course Contents	<ul style="list-style-type: none"> • Development of an own question • Preparation of a building specification and classification of selected sections of a building, ensemble, or district • Writing own small texts, which are discussed and analyzed together • Dealing with specialist literature and literature databases
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Inventory of Buildings
Course Title (German)	Inventarisierung von Gebäudeensembles
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Summer semester only
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Inventory, building specifications, using archival sources
Topics/Course Contents	<p>Archive research and on-site observations provide an overview of the historical structure of a building.</p> <ul style="list-style-type: none"> • Historical data of the landscape/city are summarized based on standards of monument topography • Introduction to archival research and the use of sources relevant to architectural history • The use of historical sources, their legibility and their implementation into our current perception are the focus of this seminar. • In addition, archival research establishes historical contexts that also demonstrate the construction process of individual districts or cities. • Together with a brief description of the respective buildings, an inventory is compiled which puts individual observations and information into context.
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Cultural Landscape Preservation
Course Title (German)	Kulturlandschaftliche Denkmalpflege
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Knowledge of interrelated cultural spaces - from a single monument to a city/landscape.
Topics/Course Contents	<ul style="list-style-type: none"> • In order to increase knowledge about cultural substance and improve conscious perception of the landscapes and cities of our built environment, this seminar will introduce and discuss individual cultural landscapes with reference to their historical data, as well as how to deal with them. • Individual architectural monuments are presented as well as connection elements of urban and rural landscapes • In this context, the focus is on regional building culture, but the topics of urban topography and urban renewal as well as UNESCO "World Heritage" projects are also dealt with in detail.
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Fairfaced Concrete Constructions
Course Title (German)	Sichtbeton
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Specialized design and construction skills • Own independent application of knowledge of the relevant design, constructional and structural dependencies in connection with fairfaced concrete constructions
Topics/Course Contents	<ul style="list-style-type: none"> • Seminar presentations on selected examples impart further knowledge of the architectural impact and the technology of construction with fairfaced concrete. • Workshops on formwork manufacturers and a complementary excursion complete the seminar.
Credit Points	2 CP
Module	Elective Module: Building Construction

Course Title	Industry Workshop
Course Title (German)	Industrieworkshop
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Every year
Competencies/Learning Objectives	<ul style="list-style-type: none"> In-depth knowledge of materials and contacts to the construction industry
Topics/Course Contents	<ul style="list-style-type: none"> As part of an excursion, a workshop lasting several days will be held at a company in the construction industry. Their materials and techniques will be studied in depth and documented during the workshop.
Credit Points	2 CP
Module	Elective Module: Building Construction

Module Title	Master's Thesis
Module Title (German)	Masterthesis
Code	M-600
Language of Instruction	German
Recommended Semester(s)	4
Module offered in	Every semester
Competencies	<p>Subject-specific and methodological competencies and skills (Knowledge and understanding as well as applying and generating knowledge)</p> <p>The master's thesis is the examination paper that concludes the master's degree. It shows that the candidate is able to deal with a problem from his or her subject area independently according to scientific methods within a given period of time. The students demonstrate that they have acquired the following advanced competences, especially for planning tasks involving existing buildings and/or in existing urban structures:</p> <ul style="list-style-type: none"> • The ability to create architectural designs that meet both aesthetic and technical requirements • Adequate knowledge of the history and theory of architecture and related arts, technologies, and humanities • Knowledge of the visual arts due to their influence on the quality of architectural design • Adequate knowledge of urban planning and design, planning in general and planning techniques • Understanding the relationship between people and buildings and between buildings and their environment and understanding the necessity of relating buildings and the spaces between them to human needs and standards • Understanding the profession and role of an architect in society, especially when creating designs that take social factors into account • Knowledge of the methods to review and develop the design for a design project • Knowledge of the structural and constructional problems associated with building design • Adequate knowledge of the physical problems and technologies related to the function of a building - providing comfort and protection against the effects of the weather • The technical skills required to meet the needs of users of a building within the limits imposed by cost factors and building regulations

-
- Adequate knowledge of the crafts, organizations, regulations, and procedures involved in the practical implementation of construction plans and the integration of the plans into the overall design

**Other competencies and skills
(Communication and cooperation)**

The acquisition of other competencies and skills is integrated into the module

Credit
Points

30 CP

Module
Courses

Colloquium
Academic Studies: Master's Thesis
Master's Thesis Architecture | Building Revitalization and Transformation

Course Title	Colloquium
Course Title (German)	Kolloquium
Language of Instruction	German
Recommended Semester(s)	4
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> The students show that they are able to support the results developed in the master's thesis in a given period of time as part of an expert discussion which is open to all members of the university.
Topics/Course Contents	the respective topic of the master's thesis
Credit Points	4 CP
Module	Master's Thesis

Course Title	Academic Studies: Master's Thesis
Course Title (German)	Wissenschaftliche Grundlagen: Masterarbeit
Language of Instruction	German
Recommended Semester(s)	4
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> • The students have the professional and methodological competence to prepare a scientific paper on a topic of their choice in the context of module M-602. • They are able to independently narrow down and critically work on a scientific question, acquire necessary knowledge, and reach scientifically sound conclusions.
Topics/Course Contents	<ul style="list-style-type: none"> • Methods of research-oriented scientific work and their application to the respective questions of the master's thesis • Investigation of the topic
Credit Points	6 CP
Module	Master's Thesis

Course Title	Master's Thesis Architecture Building Revitalization and Transformation
Course Title (German)	Masterarbeit Architektur Bauen mit Bestand
Language of Instruction	German
Recommended Semester(s)	4
Course offered in	Every semester
Competencies/Learning Objectives	<ul style="list-style-type: none"> The students show that they are able to independently work on a problem in the field of "architecture / building revitalization and transformation" according to scientific methods within a given period of time.
Topics/Course Contents	<p>The master's thesis can deal with the following topics:</p> <ul style="list-style-type: none"> Project work: architectural work: usually an architectural design Written and scientific work: usually a research project <p>mainly from the fields of preservation, adding, transformation or paste</p>
Credit Points	20 CP
Module	Master's Thesis

Module Title	Design Studio D: Paste
Module Title (German)	Projekt D: Einfügen
Code	M-500
Language of Instruction	German
Recom- mended Se- mester(s)	1, 2, 3
Module offe- red in	Winter semester only
Competen- cies	<p>Subject-specific and methodological competencies and skills (Knowledge and understanding as well as applying and generating knowledge)</p> <p>The module provides the appropriate knowledge for:</p> <ul style="list-style-type: none"> • The ability to create architectural designs that meet both aesthetic and technical requirements • Understanding the relationship between people and buildings and between buildings and their environment and understanding the necessity of relating buildings and the spaces between them to human needs and standards • Adequate knowledge of urban planning and design, planning in general and planning techniques <p>especially for planning tasks involving existing building groups and in existing urban structures.</p> <p>Other competencies and skills (Communication and cooperation)</p> <p>The acquisition of other competencies and skills is integrated into the module</p>
Credit Points	16 CP
Module Cour- ses	Design Studio D: Paste

Course Title	Paste: Design Studio D
Course Title (German)	Einfügen: Projekt D
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Winter semester only
Competencies/Learning Objectives	<ul style="list-style-type: none"> • The further development of the existing requires a different methodology than "the new" - the qualitative analysis of the context is already part of the design process. • The formulation of tasks will thus be an increasingly important part of the work of urban planners and architects. • It is important to include the strategic design of the use and program definition of a location as part of the design of the existing.
Topics/Course Contents	<ul style="list-style-type: none"> • The subject focuses on the development of a concept that provides answers to questions, especially self-developed ones, which are inherent to the location and its spatial and social context. • "Paste" thus refers to social, economic, infrastructural, and cultural areas of activity as well as to structural (typological) interventions.
Credit Points	16 CP
Module	Design Studio D: Paste

Module Title	Academic Studies D: Paste
Module Title (German)	Wissenschaftliche Grundlagen D: Einfügen
Code	M-510
Language of Instruction	German
Recom- mended Se- mester(s)	1, 2, 3
Module offe- red in	Winter semester only
Competen- cies	<p>Subject-specific and methodological competencies and skills (Knowledge and understanding as well as applying and generating knowledge)</p> <p>The module provides the appropriate knowledge for:</p> <ul style="list-style-type: none"> • The ability to create architectural designs that meet both aesthetic and technical requirements • Understanding the relationship between people and buildings and between buildings and their environment and understanding the necessity of relating buildings and the spaces between them to human needs and standards <p>especially for planning tasks involving existing building groups and in existing urban structures.</p> <p>Other competencies and skills (Communication and cooperation)</p> <p>The acquisition of other competencies and skills is integrated into the module</p>
Credit Points	8 CP
Module Cour- ses	Paste: Design Strategy Paste: Existing City and Building Typologies

Course Title	Paste: Design Strategy
Course Title (German)	Einfügen: Entwurfsstrategie Einfügen
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Winter semester only
Competencies/Learning Objectives	<ul style="list-style-type: none"> • Designing in urban space means designing a section of a larger whole that is itself only part of the city. • An essential quality of urban design is measured in its relation to this larger whole - not only as a structural, but also as a social and economic context as there is always a direct interrelation between the existing and the program
Topics/Course Contents	<ul style="list-style-type: none"> • The further development of the existing requires a different methodology than the new - different strategic approaches are tested in the project.
Credit Points	4 CP
Module	Academic Studies D: Paste

Course Title	Paste: Existing City and Building Typologies
Course Title (German)	Einfügen: Bauen mit Stadt + Gebäudetypologien
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Winter semester only
Competencies/Learning Objectives	<ul style="list-style-type: none"> • The aim is to gain an understanding of which typologies are to be found in existing buildings from the 50s to 70s. • On this basis, tools are developed for dealing with the heritage of "grey architecture".
Topics/Course Contents	<ul style="list-style-type: none"> • Applying analytical methods to evaluate and assess the potential of existing buildings • Feasibility studies and site evaluation
Credit Points	4 CP
Module	Academic Studies D: Paste

Module Title	Design Studio B: Adding
Module Title (German)	Projekt B: Weiterbauen
Code	M-300
Language of Instruction	German
Recom- mended Se- mester(s)	1, 2, 3
Module offe- red in	Winter semester only
Competen- cies	<p>Subject-specific and methodological competencies and skills (Knowledge and understanding as well as applying and generating knowledge)</p> <p>The module provides the appropriate knowledge for:</p> <ul style="list-style-type: none"> • The ability to create architectural designs that meet both aesthetic and technical requirements • Understanding the relationship between people and buildings and between buildings and their environment and understanding the necessity of relating buildings and the spaces between them to human needs and standards • Knowledge of the methods used to examine and develop the design for a design project, in particular for planning tasks involving existing buildings <p>Other competencies and skills (Communication and cooperation)</p> <p>The acquisition of other competencies and skills is integrated into the module</p>
Credit Points	16 CP
Module Cour- ses	Adding: Design Studio B

Course Title	Adding: Design Studio B
Course Title (German)	Weiterbauen: Projekt B
Language of In- struction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Winter semester only
Competen- cies/Learning Objectives	<ul style="list-style-type: none"> • In Design Studio B, students demonstrate that they are able to deal with existing buildings – primarily those built from 1870 onwards - and put them into context, and to translate their renovation, reconstruction, and/or extension into a functional and architectural concept.
Topics/Course Contents	<ul style="list-style-type: none"> • The project focuses on renovation and reconstruction of, for example, typical 19th or 20th century buildings whose building structure is not particularly worthy of protection. Often, the project involves a change or fundamental adaptation of the present use. • An integral part of the design exercise is the adaptation to today's standards, e. g. the structure, the building physics standards and/or the function and design. Today's user requirements and legal regulations must be implemented in the project, taking into account architectural, economic, and ecological conditions.
Credit Points	16 CP
Module	Design Studio B: Adding

Module Title	Academic Studies B: Adding
Module Title (German)	Wissenschaftliche Grundlagen B: Weiterbauen
Code	M-310
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Module offered in	Winter semester only
Competencies	<p>Subject-specific and methodological competencies and skills (Knowledge and understanding as well as applying and generating knowledge)</p> <p>The module provides the appropriate knowledge for:</p> <ul style="list-style-type: none"> • The ability to create architectural designs that meet both aesthetic and technical requirements • Knowledge of the structural and constructional problems associated with building design • Adequate knowledge of the physical problems and technologies associated with the function of a building - providing comfort and protection against the effects of the weather especially for planning tasks involving existing buildings. <p>Other competencies and skills (Communication and cooperation)</p> <p>The acquisition of other competencies and skills is integrated into the module</p>
Credit Points	8 CP
Module Courses	Adding: Design Strategy Adding: Building Construction

Course Title	Adding: Design Strategy
Course Title (German)	Weiterbauen: Entwurfsstrategie
Language of In- struction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Winter semester only
Competen- cies/Learning Objectives	<ul style="list-style-type: none"> • Students familiarize themselves with and understand different strategies in dealing with existing buildings, structural requirements, and the associated possibilities in the building envelope. • During the seminar, students learn and practice how to deal with existing building structure in a responsible way, based on exemplary architectural projects. Strategies and knowledge for the transformation of existing buildings and their function, as well as preservation, reinforcement or necessary additions are analyzed, documented, and compiled.
Topics/Course Contents	<ul style="list-style-type: none"> • Constantly increasing requirements in terms of energy saving, thermal insulation and comfort require knowledge of possible strategies in dealing with the existing structure. • Students analytically develop different strategies on the basis of exemplary architectural projects in the respective projects.
Credit Points	4 CP
Module	Academic Studies B: Adding

Course Title	Adding: Building Construction
Course Title (German)	Weiterbauen: Bauen mit Bestand
Language of In- struction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Winter semester only
Competen- cies/Learning Objectives	<ul style="list-style-type: none"> • Scientific analysis and understanding of building structure with a particular focus on buildings from 1850 onwards whose structure is not particularly worthy of protection • During practice during the seminar, students acquire knowledge of historical conditions, building regulations, building materials, construction techniques and structural joints as well as methods for the further use, renovation, and extension of historical structure with regard to today's standards.
Topics/Course Contents	<ul style="list-style-type: none"> • The renovation, reconstruction and extension of existing buildings requires scientific examination of the building techniques and materials used at the time of construction. • In the practice sessions, the students acquire this knowledge in an exemplary way with regard to a period, which is usually identical to the building period in project B. This is supplemented by general renovation techniques such as drainage, energetic restoration of exterior components or modifications of load-bearing components.
Credit Points	4 CP
Module	Academic Studies B: Adding

Module Title	Design Studio C: Transformation
Module Title (German)	Projekt C: Überformen
Code	M-400
Language of Instruction	German
Recom- mended Se- mester(s)	1, 2, 3
Module offe- red in	Summer semester only
Competen- cies	<p>Subject-specific and methodological competencies and skills (Knowledge and understanding as well as applying and generating knowledge)</p> <p>The module provides the appropriate knowledge for:</p> <ul style="list-style-type: none"> • The ability to create architectural designs that meet both aesthetic and technical requirements • Adequate knowledge of the physical problems and technologies related to the functioning of a building - providing comfort and protection against the effects of the weather conditions especially for planning tasks involving existing buildings. <p>Other competencies and skills (Communication and cooperation)</p> <p>The acquisition of other competencies and skills is integrated into the module</p>
Credit Points	16 CP
Module Cour- ses	Transformation: Design Studio C

Course Title	Transformation: Design Studio C
Course Title (German)	Überformen: Projekt C
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Summer semester only
Competencies/Learning Objectives	<ul style="list-style-type: none"> • In Design Studio C, students demonstrate that they can understand a constructional topic on existing buildings, put it into context and transform it into a functional or architectural concept. • In addition, the aspects of building technology and climate design must be integrated into the design concept for the transformation of the existing building to such an extent that the transformed building meets today's requirements.
Topics/Course Contents	<ul style="list-style-type: none"> • The focus of the project is on adapting existing buildings - usually those which are not particularly worthy of protection - to modern use. • New requirements for the building envelope and building technology are regularly discussed. • On the basis of the design, students also examine which construction techniques, building materials and structural joints are economically and ecologically effective with regard to a holistic building transformation.
Credit Points	16 CP
Module	Design Studio C: Transformation

Module Title	Academic Studies C: Transformation
Module Title (German)	Wissenschaftliche Grundlagen C: Überformen
Code	M-410
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Module offered in	Summer semester only
Competen- cies	<p>Subject-specific and methodological competencies and skills (Knowledge and understanding as well as applying and generating knowledge)</p> <p>The module provides:</p> <ul style="list-style-type: none"> • Knowledge of the methods to examine and develop a draft for a design project • Adequate knowledge of the physical problems and technologies related to the functioning of a building - providing comfort and protection against the effects of the weather <p>especially for planning tasks involving existing buildings.</p> <p>Other competencies and skills (Communication and cooperation)</p> <p>The acquisition of other competencies and skills is integrated into the module</p>
Credit Points	8 CP
Module Cour- ses	Transformation: Design Strategy Transformation: Energy and Building Services

Course Title	Transformation: Design Strategy
Course Title (German)	Überformen: Entwurfsstrategie Überformen
Language of In- struction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Summer semester only
Competen- cies/Learning Objectives	<ul style="list-style-type: none"> • Students familiarize themselves with and understand different strategies in dealing with existing buildings and their renovation, reconstruction and transformation into buildings that meet today's aesthetic, technical and building physics requirements. • By means of practice sessions during the seminar, students acquire knowledge and methods for the transformation of historical building structures to today's standards.
Topics/Course Contents	<ul style="list-style-type: none"> • Existing buildings whose structures are not particularly worthy of protection are regularly extensively dismantled down to the shell of the building and subsequently renovated (complete renovation). This work requires advanced architectural design skills that meet both aesthetic and technical requirements. • Student analytically develop different strategies on the basis of exemplary architectural projects in the respective projects.
Credit Points	4 CP
Module	Academic Studies C: Transformation

Course Title	Transformation: Energy and Building Services
Course Title (German)	Überformen: Energie + Gebäudetechnik
Language of In- struction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Summer semester only
Competen- cies/Learning Objectives	<ul style="list-style-type: none"> • Students familiarize themselves with and understand different strategies in dealing with existing buildings, with a special focus on new research results on indoor climate and building physics. • By means of practice sessions during the seminar, students acquire knowledge and methods for the analysis and application of such findings in the building project.
Topics/Course Contents	<ul style="list-style-type: none"> • Existing buildings whose structures are not particularly worthy of protection are regularly extensively dismantled down to the shell of the building and subsequently transformed (complete renovation) so that they comply with today's standards and regulations, especially in terms of building physics (energy efficiency) and technical (building technology) aspects. • Student analytically and scientifically develop different strategies on the basis of exemplary architectural projects for this range of topics.
Credit Points	4 CP
Module	Academic Studies C: Transformation

Module Title	Design Studio A: Preserve
Module Title (German)	Projekt A: Erhalten
Code	M-200
Language of Instruction	German
Recom- mended Se- mester(s)	1, 2, 3
Module offe- red in	Summer semester only
Competen- cies	<p>Subject-specific and methodological competencies and skills (Knowledge and understanding as well as applying and generating knowledge)</p> <p>The module provides the appropriate knowledge for:</p> <ul style="list-style-type: none"> • Basic evaluation for all activities concerning existing buildings, build- ing survey, construction research, archival work • Adequate knowledge of the history and theory of architecture and re- lated arts, technologies, and humanities • The ability to create architectural designs that meet both aesthetic and technical requirements • The technical skills required to meet the needs of users of a building within the limits imposed by cost factors and building regulations • Adequate knowledge of the crafts, organizations, regulations, and procedures involved in the practical implementation of construction plans as well as the integration of the plans into the overall design <p>Other competencies and skills (Communication and cooperation)</p> <p>The acquisition of other competencies and skills is integrated into the mod- ule</p>
Credit Points	16 CP
Module Cour- ses	Preserve: Design Studio A Preserve: Construction

Course Title	Preserve: Design Studio A
Course Title (German)	Erhalten: Projekt A
Language of In- struction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Summer semester only
Competen- cies/Learning Objectives	The students learn the methodical and analytical approach of a project and feasibility study. The work steps in terms of graphic and analytical basics as well as economic evaluation criteria are systematically learned and applied.
Topics/Course Contents	The project focuses on the economic and use-specific areas of project development. The evaluation of the partially historical building structures and the economic evaluation of future use are the main focus. In the course of construction research, students learn how to determine and evaluate a historical building structure, compile planning documents, and constructively evaluate future use.
Credit Points	8 CP
Module	Design Studio A: Preserve

Course Title	Preserve: Construction
Course Title (German)	Erhalten: Bauforschung
Language of In- struction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Summer semester only
Competen- cies/Learning Objectives	<ul style="list-style-type: none"> • Knowledge of different survey, visual representation, and evaluation methods • Classification of historical substance in construction history • Preparing texts and building specifications
Topics/Course Contents	<p>The main focus of the course is the comprehensive examination of a building, an urban area, a city, or region. By means of precise observation, surveying or room data sheets, the construction progress and development of the building are identified and theoretically reconstructed. Based on literature research and the knowledge of comparative examples, a classification of the object in the context of architectural history is developed. Knowledge of the special features and significance of the building are the basis for a "value assessment", a classification in the context of cultural history or in an urban context. The object-specific use of modern surveying and documentation techniques is of particular importance here.</p>
Credit Points	8 CP
Module	Design Studio A: Preserve

Module Title	Academic Studies A: Preserve
Module Title (German)	Wissenschaftliche Grundlagen A: Erhalten
Code	M-210
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Module offered in	Summer semester only
Competencies	<p>Subject-specific and methodological competencies and skills (Knowledge and understanding as well as applying and generating knowledge)</p> <p>The module provides:</p> <ul style="list-style-type: none"> • Knowledge of the structural and constructional problems associated with building design • The technical skills required to meet the needs of users of a building within the limits imposed by cost factors and building regulations • Adequate knowledge of the crafts, organizations, regulations, and procedures involved in the practical implementation of construction plans as well as the integration of the plans into the overall design, in particular for planning tasks involving existing buildings <p>Other competencies and skills (Communication and cooperation)</p> <p>The acquisition of other competencies and skills is integrated into the module</p>
Credit Points	8 CP
Module Courses	Preserve: Project Development Preserver: Cultural Heritage and Preservation

Course Title	Preserve: Project Development
Course Title (German)	Erhalten: Projektentwicklung
Language of Instruction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Summer semester only
Competencies/Learning Objectives	<ul style="list-style-type: none"> • The students acquire a basic understanding of the economic interrelationships involved in project development, especially in the case of existing properties. • The aim is to enable graduates to understand the interrelation between construction planning and economic efficiency calculation (generally calculation of overall return on investment).
Topics/Course Contents	<ul style="list-style-type: none"> • Content and procedure of project development • Involved parties / tasks of the architect • Location and site analysis • Planning requirements and their optimization • Building planning with suitable calculation models • Cost and schedule planning • Selling and rental • Calculations of overall return on investment • Property valuation
Credit Points	4 CP
Module	Academic Studies A: Preserve

Course Title	Preserve: Design Strategy Cultural Heritage and Preservation
Course Title (German)	Erhalten: Entwurfsstrategie Denkmalpflege
Language of In- struction	German
Recommended Semester(s)	1, 2, 3
Course offered in	Summer semester only
Competen- cies/Learning Objectives	<ul style="list-style-type: none"> • Students acquire architectural design skills in accordance with regulations for historical monuments that meet aesthetic, technical and cultural-historical requirements. • Students acquire adequate knowledge of the crafts, organizations, regulations, and procedures involved in the practical implementation of construction plans, taking into account the specific concerns of historical monument preservation.
Topics/Course Contents	<ul style="list-style-type: none"> • In this seminar, the various professional fields in the area of preservation of historical monuments are introduced and explained in more detail. • The various methods and tasks in the practical preservation of historical monuments are presented, including the fields of preservation of historical, art, garden and landscape monuments, the monuments of technical and industrial history as well as urban and settlement structures. • The architectural and conservational treatment of historical monuments and the historical building techniques to be found here are illustrated by means of practical examples.
Credit Points	4 CP
Module	Academic Studies A: Preserve