Description of the degree program

Architecture (Bachelor)
PO 4

Date: 05.03.2026

Table of contents

Historical and Cultural Knowledge

Title	History and Theory of Architecture 1		
Number	4118080	**Module version**	
Shorttext	ARC-IBG-08	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	2	**Institution**	Institut für Baugeschichte
Hours per Week / ECTS	6 / 5,0	**Module owner**	Prof. Dr. Ulrike Fauerbach
Workload (h)			
Class attendance (h)	70	**Self studying (h)**	80
Compulsory requirements			
Expected performance/ Type of examination	Written exam (120 Min.)		
Course achievement	Portfolio		

Contents

Building history is taught as the result of a long and entangled history of ideas, construction, forms and knowledge. Students will get an overview over the main eras of cultural and architectural history and a selection of their most important buildings as well as the historic parameters of design and construction. During winter term, the course „Baugeschichte I“ is concerned with key building forms and types as well as building technique around the Mediterranean in antiquity. On this base the summer term course "Baugeschichte II" will deal with medieval and early modern architecture with a strong focus on Europe. History of ideas, of research and appropriation in the course of the individual eras will be an additional topic.
In the one-week field school „Workshop Baugeschichte“ students will get insight into the most important tools of building archaeology, which are taught within actual historic buildings.

Objective qualification

Students learn to understand the History of Architecture and Building Construction as a repository of knowledge and to assess the current transformations of our societies against the background of millennia. These transformations are materialized in historic architecture; we can read buildings like books. The true value of historic monuments is not sought in beauty or a potential to convey a feeling of identity. They are understood as a source in their own right, which can reveal all aspects of human life, a source we need to perceive and to preserve. Students will learn how to analyse historic architecture in its cultural, technical and socio-topographical context by surveying and researching buildings on site, as well as by studying written and visual sources. This will enable them to perceive interconnections within architectural history and to communicate them in oral, written and graphical form. Thus they can achieve the precondition to help preserving the built heritage and to transfer their analysis into the architectonic discourse.

Literature

L. Benevolo, Die Geschichte der Stadt (^{8}2000)
Chr. Freigang (Hrsg.), Reclam – Wörterbuch der Architektur (^{21}2020)

H. Koepf, Bildwörterbuch der Architektur (^{5}2019)
W. Müller, dtv Atlas Baukunst, 2 Bde. (^{15}2009)
T. Busen et al., Bauaufnahme (2016)
U. Hassler (Hrsg.), Bauforschung (2010)
Für detailliertere u. kommentierte Literaturempfehlungen siehe StudIP

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	2,0	Lecture	german
	2,0	Lecture	german
	2,0	Practical exercise	german

Title	History and Theory of Architecture 2		
Number	4199840	**Module version**	
Shorttext	ARC-STD-84	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	2	**Institution**	Institut für Geschichte und Theorie der Architektur und Stadt
Hours per Week / ECTS	4 / 5,0	**Module owner**	Prof. Dr. Tatjana Schneider
Workload (h)			
Class attendance (h)	42	**Self studying (h)**	108
Compulsory requirements			
Recommended requirements	Attendance of a voluntary student-run tutorial on primary sources and the expansion of knowledge about cultural monuments is recommended as a supplement to the lecture.		
Expected performance/ Type of examination	Written exam (180 Min.)		
Course achievement			

Contents

History of architecture between the Enlightenment and the present.
Central theoretical positions on the conceptual, material, and technical definition of architecture. Sociocultural aspects of the production and reception of architecture.
Fundamentals of the economic, social, and aesthetic conditions of the urbanisation process from the 19th to the 21st century.
Architecture and globalisation.
Elaboration and analysis of primary texts on architectural theory (in the exercise or tutorial). Basics of object-related building-historical analyses

Objective qualification

The students will acquire basic knowledge about the conditions and perception of architectural production from the European Enlightenment to the present. On the basis of specific buildings and projects, theoretical writings and biographies, they will gain insight into how the structural design of the environment was replicated in certain historical-cultural situations. They will be able to independently develop theoretical positions in architecture within this context. The students will acquire the subject-specific fundamentals and the terminology to reflect on both other positions and their own as designers of the built environment and to situate themselves within their respective aesthetic, economic and political-social discourses in both oral and written form.

Literature

Bibliographical references are provided online via stud.ip

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
History and Theory of Architecture and the City	2,0	Lecture	german
History and Theory of Architecture and the City 2	2,0	Lecture	german

Title	History and Theory of Architecture 3		
Number	4199930	**Module version**	
Shorttext	ARC-STD-93	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Baugeschichte Institut für Geschichte und Theorie der Architektur und Stadt
Hours per Week / ECTS	4 / 5,0	**Module owner**	Prof. Dr. Ulrike Fauerbach
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	94
Compulsory requirements	Determination (in the semester programme architecture) and validation by the institutes		
Expected performance/ Type of examination	Oral presentation or written assignment or portfolio		
Course achievement			

Contents

Building history
Advanced regional history on the basis of selected examples.
Analysis of individual buildings in terms the history of style and form: regional identities; receptions of transregional developments.
Methodological fundamentals of historical building research and analysis.
Advanced study of building history of exemplary objects and their classification in superordinate contexts (cultural history and history of building technology).

History and Theory of Architecture and the City
Fundamentals for understanding the city as an interrelationship between built and lived space. Analysis of urban planning concepts and actual urbanisation processes from the 19th to the 21st century. Integration of cultural studies and gender-specific approaches and methods.
Contextualisation of modern architecture and architectural theory in the history of culture and ideas.
Description of developmental trajectories of the space-related arts and analysis of reciprocal references to, and influences on, architectural theory.

Objective qualification

Building history
The module guides the students, on the basis of the knowledge acquired so far in the field of historical and cultural foundations of architecture and urban studies, to the ability of independent scientific work. It serves to teach fundamental methods of historical building research, the critical study of sources and the development of own research questions. Students are familiarised with the subject-specific methods of analysis, presentation and documentation of historical buildings. They learn to understand historical design and construction processes in the context of their socio-cultural and technical framework conditions using selected examples and develop sensitivity for dealing with historical building substance in accordance with its quality.

History and Theory of Architecture and the City

Students will gain knowledge of scientific methods for analysing concepts in urban planning and relate them to existingl urbanisation processes with regard to their socio-cultural, economic, and aesthetic implications. They will also gain insight into concepts from relevant neighbouring disciplines and their methods (history and theory of urbanisation). On the basis of examples from various epochs, students will acquire in-depth knowledge of the discourses concerning architectural modernism and will therefore become able to analyse and evaluate architecture and the city in a substantiated manner while arguing scientifically in written and oral form (advanced study of the history and theory of architecture). The students will work out connections between architectural theory and developments in the spatial arts with respect to their critical potential to the cultural orders of spatial production. They will be able to reflect on their own conceptions of space against this background (architectural theory and art history).

Literature

Bibliographical references on the themes of the seminars will be announced in the respective semester.

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Related courses

Rules for the choice of courses

Compulsory attendance

Name of the course	SWS	Eventtype	Language
	2,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german

Design and Visual Arts

Title	Introduction to Drawing and CAD		
Number	4199760	**Module version**	
Shorttext	ARC-STD-76	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	2	**Institution**	Institut für Gestaltungmethodik und Darstellung Institut für Städtebau und Entwurfsmethodik
Hours per Week / ECTS	10 / 5,0	**Module owner**	Prof. Fahim Mohammadi
Workload (h)			
Class attendance (h)	140	**Self studying (h)**	10
Compulsory requirements			
Expected performance/ Type of examination			
Course achievement			
Contents			
Objective qualification			
Literature			
u.a.: -Leopold, Cornelie, Geometrische Grundlagen der Architekturdarstellung (Teubner, Wiesbaden, 2012) -Eisenman, Peter, Ten Canonical Buildings , (Rizzoli, New York 2008) -Roger, H. Clark, und Michael Pause, Precedents in Architecture: Analytical Diagrams, Formative Ideas and Partis (John Wiley & Sons, London 2005) Vollständige Literaturliste auf Anfrage am Institut für Experimentelles Entwerfen erhältlich.			

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Related courses
Rules for the choice of courses
Compulsory attendance

Name of the course	**SWS**	**Eventtype**	**Language**

	4,0	Lecture/Exercise	german
	6,0	Exercise	german

Title	Design 1		
Number	4199740	**Module version**	
Shorttext	ARC-STD-74	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Architekturbezogene Kunst
Hours per Week / ECTS	6 / 5,0	**Module owner**	Prof. Folke Köbberling
Workload (h)			
Class attendance (h)	84	**Self studying (h)**	66
Compulsory requirements			
Expected performance/ Type of examination	Portfolio with a Präsentation.		
Course achievement			

Contents

Lectures - on the semester topics with an art-theoretical focus and cultural and philosophical references; relevant artistic positions and developments are presented.

Exercises - modeling and drawing, conceptual artistic work and construction: sketches, spatial freehand drawings, composition exercises, development of spatial models, modeling and molding, concept drawing and concept description, portfolio creation, oral presentation of the results, visits to exhibitions.

Objective qualification

The students acquire basic knowledge of artistic techniques, materials, plastic processes and recognize the integral artistic approach in their own work. They sharpen their visual perception. They are able to draw freehand, to think through compositionally two- and three-dimensional artifacts, to shape and model spatial models. You can test changes and images through interventions and positioning in space and subsequently create site-specific room and object installations. They are empowered with tools to deal with They train their rhetorical skills through frequently repeated presentations.

Literature

Literaturliste liegt am Lehrstuhl aus

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**

	6,0	Lecture/Exercise	german

Title	Design 2		
Number	4199750	**Module version**	
Shorttext	ARC-STD-75	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Architekturbezogene Kunst
Hours per Week / ECTS	6 / 5,0	**Module owner**	Prof. Folke Köbberling
Workload (h)			
Class attendance (h)	84	**Self studying (h)**	66
Compulsory requirements			
Expected performance/ Type of examination	Portfolio with a presentation		
Course achievement			

Contents

Lectures - on the semester topics with an art-theoretical focus and cultural and philosophical references.

Exercises - Conception and realization of (spatial) artistic works in groups and individual work on a semester topic and their presentation as part of an exhibition in the white cube or in public space; Documentation with photo and video technology; Transformation of a conceptual content into a three-dimensional form content; Design with traditional and current materials as well as with industrially manufactured objects; visits to exhibitions in museums and galleries; Mediation of graphic and artistic methods to represent complex relationships (mappings); Group discussions and corrections, as well as presentations of your own work.

Objective qualification

The students acquire basic knowledge of drawing, photo collage and photo montage. They can present thematic and spatial concepts in writing and in a creative way and have mastered the display options of mapping. They can do one-to-one translations using self-made models. With the help of visualizing collages, they have (further) developed their spatial imagination and are able to place objects in a surrounding space, to scale them appropriately and to relate them to it. They can design and implement room installations independently. In the obligatory teamwork, they develop their social skills and ability to work in a team. In a joint exhibition, they learn how to compositionally deal with the exhibition location and space and how to stage their works. Students are empowered to shape the semester topic to document a portfolio.

Literature

Literaturliste liegt am Lehrstuhl aus

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	6,0	Lecture/Exercise	german

Title	Medial Design 1		
Number	4198310	**Module version**	
Shorttext	ARC-STD2-31	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration		**Institution**	Institut für Gestaltungmethodik und Darstellung
Hours per Week / ECTS	5 / 5,0	**Module owner**	Prof. Dr. Matthias Karch
Workload (h)			
Class attendance (h)		**Self studying (h)**	
Compulsory requirements			
Expected performance/ Type of examination			
Course achievement			
Contents			
Objective qualification			
Literature			
Literaturempfehlungen beziehen sich fakultativ auf die jeweils semesterweise weiterentwickelten und aktualisierten Lehrinhalte. Über die konkret angebotenen Lehrveranstaltungen und -inhalte informiert das jeweilige Semesterprogramm.			

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	1,0	Lecture	german
	5,0	Exercise	german

Title	Medial Design 2		
Number	4199910	**Module version**	
Shorttext	ARC-STD-91	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Gestaltungmethodik und Darstellung
Hours per Week / ECTS	5 / 5,0	**Module owner**	Prof. Dr. Matthias Karch
Workload (h)			
Class attendance (h)	75	**Self studying (h)**	75
Compulsory requirements	Completion of the module “Media Design 1”		
Expected performance/ Type of examination	Portfolio with presentation		
Course achievement			

Contents

Lecturing of immersed knowledge about the medial design processes.
Lecturing of immersed knowledge of cross-media competences about the analogue and digital materialising.
Media theory and history of architecture.

Objective qualification

The research field of the module is the time-based, urban-medial, architectural-performative space of the present. In this module, the students explore the interdependence of medially defined phenomena/technologies and design-related methods/strategies and implement these in a process oriented and cross-media manner through photographs, drawings, diagrams, notations (design of processes), models and other suitable presentation forms. Immersed knowledge in the area of the medial, digital design as well as the digital/parametrically controlled manufacturing (CNC) will be taught. A conceptional focus is placed on the design dependent change of the media (analogue/digital). Based on repeated presentation, the students train their capabilities to teach complex architecture related facts in a comprehensible manner. Through the obligatory team work, they train their design as well as their social competence.

Literature

Literature recommendations refer to the facultative lecture contents whose development is advanced and updated after every semester. The respective semester program provides information about the specifically offered courses and course contents.

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	5,0	Exercise	german
	1,0	Lecture	german

Title	Illustration and Design		
Number	4198230	**Module version**	
Shorttext	ARC-STD2-23	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Architekturbezogene Kunst Institut für Gestaltungmethodik und Darstellung
Hours per Week / ECTS	4 / 6,0	**Module owner**	Prof. Fahim Mohammadi
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	124
Compulsory requirements	Determination (in the semester program architecture) and review by the institutes		
Expected performance/ Type of examination	Home work or portfolio each with presentation (and discussion)		
Course achievement			

Contents

Lecturing of basic knowledge for the handling of digital methods of the architectural model construction, parametrical design, generative design, digital form finding processes. Lecturing of immersed knowledge for the handling of cross-media two and three dimensional design and presentation methods using the following media: Drawing, collage, print techniques, photography, photomontage, room installations, computer supported methods (digital drawing, digital modelling, non-linear video, animation) architectural models, analogue and digital, up to a scale of 1:1, as well as all hybrid forms thereof. Organisation and execution of projects and exhibitions: Written presentation of concepts, schedule and finance plan, acquisition of third-party funds, press work, documentation of the work, catalogue.

Objective qualification

The students will be qualified to identify the interdependence of presentation and design related issues and to process them cross-media. In this case, the concept dependent change of the medium provides a special knowledge gain. The design related handling of the technology of the digital model construction will be taught and will be made fruitful in a dialogue with the technology of the analogue model construction. The student will be qualified to conceptualise, develop and realise independent project work. After the completion of this module, the students have updated, expanded and specialised the art-theoretical basic knowledge. They learn the entire bandwidth of the artistic work and they are capable of performing image analyses. The students develop their rhetorical capabilities through frequently repeated (intermediate) presentations. They train their social competence and team capability through the obligatory team work

Literature

The literature will be listed subject-related.

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
		Seminar	german
		Seminar	german
		Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german

Design and Construction

Title	Building Construction 1		
Number	4199770	**Module version**	
Shorttext	ARC-STD-77	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Baukonstruktion
Hours per Week / ECTS	4 / 5,0	**Module owner**	Prof. Helga Blocksdorf
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	124
Compulsory requirements			
Expected performance/ Type of examination	Portfolio		
Course achievement			

Contents

Construction using bar-shaped elements. Combination to form flat and spatial structures and enforce stability. Correlation between form and design in framed building; load-bearing framework principles. Semi-finished materials made of wood and steel and their application. Building elements: walls, floors, pitched roofs. True-to-scale plan presentation in flat projections and three-dimensional representations; model building. Analysis of key examples.

Objective qualification

Students are familiar with building-sector terminology. They are equipped with a basic knowledge of building construction and structural physics. They are in a position to gauge engineered structures and structural building principles, thus understanding the interdependencies between construction, form and design. They are able to apply this knowledge to the design and construction of simple buildings and to produce the corresponding design and working plans.

Literature

Es stehen umfangreiche Merkblätter und Handbücher unter https://www.tu-braunschweig.de/baukonstruktion zur Verfügung.

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	2,0	Lecture	german
	2,0	Exercise	german

Title	Building Construction 2		
Number	4199780	**Module version**	
Shorttext	ARC-STD-78	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Baukonstruktion
Hours per Week / ECTS	4 / 6,0	**Module owner**	Prof. Helga Blocksdorf
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	124
Compulsory requirements			
Expected performance/ Type of examination	Portfolio		
Course achievement			

Contents

Construction using flat-shaped elements. Combination to form stable spatial structures. Structural principles in forms of solid construction forms, dimensions and modules. Building elements: foundations, base, walls, ceilings, roofs, stairs, windows, doors. Technical plan presentation in flat projections and three-dimensional representations; model building

Objective qualification

Students are familiar with building-sector terminology. They are equipped with a basic knowledge of building construction and structural physics. They are in a position to gauge engineered structures and structural building principles, thus understanding the interdependencies between construction, form and design. They are able to apply this knowledge to the design and construction and reconstruction of simple buildings; present them in the corresponding design and working plans, as well as in models; and clarify them terminologically and professionally describe them.

Literature

Es stehen umfangreiche Merkblätter und Handbücher unter https://www.tu-braunschweig.de/baukonstruktion zur Verfügung.

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Related courses

Rules for the choice of courses

Compulsory attendance

Name of the course	SWS	Eventtype	Language
	2,0	Lecture	german

	2,0	Exercise	german

Title	Statics and Structures		
Number	4198190	**Module version**	
Shorttext	ARC-STD2-19	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	2	**Institution**	Institut für Tragwerks-entwurf
Hours per Week / ECTS	4 / 5,0	**Module owner**	Prof. Dr. Harald Kloft
Workload (h)			
Class attendance (h)	65	**Self studying (h)**	85
Compulsory requirements			
Expected performance/ Type of examination	Written exam (120 Min.)		
Course achievement			

Contents

In the module Load-bearing Structures (TWL), students acquire the basic knowledge of statics and strength theory. Based on the knowledge of the impacts on structures (dead loads, traffic loads, wind, snow, etc.), loads and forces on structures are first determined. Based on the loads and forces, the external support reactions as well as the internal forces and bending moments can be calculated for basic, statically determined load-bearing structures such as beams and columns.

In addition, knowledge of cross-sectional values such as moments of resistance and area moments of inertia for standard cross-sections is imparted. Based on the internal force areas and cross-section values, the relevant stresses are calculated for the approximate design of beams and columns. The students develop an understanding of the tasks of a load-bearing structure and can understand the stresses acting on a structure in the form of forces and moments and determine their transmission in simple static systems.

Objective qualification

The students learn the basic knowledge of statics and strength theory in construction. They develop an understanding of the tasks of load-bearing structures and can identify the stresses acting on a building in the form of forces and moments and determine their transmission in simple static systems. They know the basic standards, formulae and tables and can apply them to the design, planning and dimensioning of load-bearing structures.

Literature

Allgemeine Literaturhinweise unter: www.ite.tu-braunschweig.de. Themenbezogene Literaturhinweise erfolgen in den Lehrveranstaltungen.

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	4,0	Lecture/Exercise	german
Literature			
Allgemeine Literaturhinweise unter: www.ite.tu-braunschweig.de, Themenbezogene Literaturhinweise erfolgen in den Lehrveranstaltungen.			

Title	Materials Science		
Number	4334220	**Module version**	
Shorttext	BAU-iBMB-22	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Fachgebiet Baustoffe
Hours per Week / ECTS	4 / 5,0	**Module owner**	Dr. Thorsten Leusmann
Workload (h)			
Class attendance (h)	65	**Self studying (h)**	85
Compulsory requirements			
Expected performance/ Type of examination	Written exam (90 Min.)		
Course achievement			

Contents

On the basis of scientific fundamentals, knowledge is imparted on the internal structure, composition, production, processing and properties as well as on their application in construction area of metallic materials (steel, iron, non-ferrous metals), organic materials (wood, plastics) and mineral materials (glass, concrete). The following topics are covered: mechanical behaviour including deformation properties, stress-strain diagrams and mechanical properties as well as thermal behaviour. Furthermore, materials of the building industry are presented on the basis of practical examples.
Within the framework of seminar exercises, the acquired knowledge is deepened and practically demonstrated in small groups.

Objective qualification

After attending the module, the students will be able to describe the properties, manufacturing processes and processing techniques of the most important building materials like steel, iron, non-ferrous metals, wood, concrete, glass and polymers and to distinguish the building materials on the basis of their characteristic properties.
Based on scientific fundamentals, the students are able to describe the essential structure-related characteristics of the building materials and interrelate properties with the elementary structure of the materials.
In addition, the participants will be able to select a suitable building material based on a given requirement profile. The targeted case studies are intended to strengthen the students' ability to abstract and to transfer their acquired knowledge to a novel area of concern. Besides, seminar exercises are set to provide students with practical experience and competence to design concrete mix formulations.

Literature

Es steht ein ausführliches Skript zur Verfügung.

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	4,0	Lecture/Exercise	german

Title	Structural Design - Conceptual Design and Structural Principles		
Number	4199850	**Module version**	
Shorttext	ARC-STD-85	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Tragwerks-entwurf
Hours per Week / ECTS	6 / 5,0	**Module owner**	Prof. Dr. Harald Kloft
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	94
Compulsory requirements			
Expected performance/ Type of examination	Portfolio or written exam (120 Min.)		
Course achievement			

Contents

In the first part of the module, the modes of action of basic load-bearing structures such as single-span girders, hinged girders, continuous girders, frames and trusses are dealt with. Furthermore, knowledge of the basic standards, formulae and tables is taught with the aim of transferring these to the design, construction and dimensioning of load-bearing structures. The second part teaches how to combine the various structural elements in a integral structural design. This includes Determination of the load-bearing components (primary and secondary structure), development of a bracing concept, representation of static systems and the flow of forces, dimensioning with the aid of rules of thumb as well as the constructive implementation of essential detailed points of load-bearing structures.

Objective qualification

The aim of the course Structural Design (TWE) is, after learning the basics of load-bearing structure theory in the first year of study, to understand the load-bearing structure as an integral part of architectural design. To this end, the basic design principles for load-bearing structures and their load-bearing components in reinforced concrete, steel and timber construction as well as masonry construction are taught. After successful completion of the course, students should be able to understand the complexity of load-bearing structures and to use materials and types of structural systems in a design-related manner.

Literature

Allgemeine Literaturhinweise unter: www.ite.tu-braunschweig.de. Themenbezogene Literaturhinweise erfolgen in den Lehrveranstaltungen.

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	6,0	Lecture/Exercise	english german
Literature			
Allgemeine Literaturhinweise finden Sie auf unserer Website: www.ite.tu-braunschweig.de und www.ibmb.tubraunschweig.de. Themenbezogene Literaturhinweise werden in den Lehrveranstaltungen mitgeteilt und in StudiP zur Verfügung gestellt.			

Title	Building Physics		
Number	4199860	**Module version**	
Shorttext	ARC-STD-86	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Bauklimatik und Energie der Architektur
Hours per Week / ECTS	4 / 5,0	**Module owner**	Prof. Elisabeth Endres
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	94
Compulsory requirements			
Expected performance/ Type of examination	Written exam (120 Min.)		
Course achievement			

Contents

Basics of climate-responsive and energy-efficient planning and building.
Comfort for occupants in rooms / buildings and hygiene.
Approximate energy balance of a building, annual energy demand, total heat transmission coefficient (U-value).
Calculation, planning and implementation of necessary thermal insulation measures on the building.
Reduction and prevention of thermal bridges, calculation of condensation for building components.
Prevention and reduction of overheating by structural measures.
Prevention of stress caused by moisture that could endanger building components.
Preventive structural fire protection, fire protection laws and regulations.
Basics of building and room acoustics, room acoustic planning.

Objective qualification

The students know the essential aspects of climate-responsive construction and are familiar with the essential regulations of building physics. They are able to determine the physical qualities of buildings and constructions such as energy balance, total energy demand or condensation risk of building components. They know about the requirements of comfort and living hygiene as well as the necessary heat and moisture protection measures in buildings. They know the requirements and possibilities of daylight or artificial light use, building acoustics and structural fire protection. Students are familiar with the common display and vocabulary to communicate with other engineering disciplines.

Literature

-Hausladen, G. et al. (2009): Ausbau Atlas. Integrale Planung, Innenausbau, Haustechnik. Basel, Berlin, München:
Birkhäuser.
-Hausladen, G. (2005): ClimaDesign. Lösungen für Gebäude, die mit weniger Technik mehr können. München: Callwey.
-Neufert, E. (2018): Bauentwurfslehre. Grundlagen Normen Vorschriften. Hg. v. Johannes Kister.
-Bohne, D. (2019): Technischer Ausbau von Gebäuden. Und nachhaltige Gebäudetechnik. Wiesbaden: Springer Vieweg.
-Pistohl, W. et al. (2016): Handbuch der Gebäudetechnik. Band 1&2. Köln: Bundesanzeiger Verlag.

-Zürcher, C. et al. (2018): Bauphysik. Bau und Energie. Zürich: vdf Hochschulverlag AG an der ETH Zürich (Bau und Energie). https://enbau-online.ch/bauphysik/
-Hayner, M. et al. (2011): Faustformel Gebäudetechnik. Für Architekten. München: Dt. Verl.-Anst.
-Albers, K.-J. (Hg.) (2018): Recknagel - Taschenbuch für Heizung und Klimatechnik. Augsburg, Essen: ITM InnoTech
Medien GmbH; Vulkan-Verlag GmbH.

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Related courses

Rules for the choice of courses

Compulsory attendance

Name of the course	SWS	Eventtype	Language
	4,0	Lecture/Exercise	german

Literature

- C. Zürcher, T. Frank: Bauphysik, vdf, Hochschulverlag AG an der ETH Zürich und B. G. Teubner Stuttgart, 2004.

- A. Pech, C. Pöhn: Bauphysik, Springer-Verlag, Wien, 2004. (Gutes, übersichtliches Buch. Bezieht sich allerdings auf österreichische Normung # in großen Teilen identisch mit der deutschen Normung)

- P. Schulz: Schallschutz, Wärmeschutz, Feuchteschutz, Brandschutz - Handbuch für den Innenausbau, Deutsche Verlags-Anstalt, Stuttgart München, 2002.

- R. Hohmann, M.J. Setzer: Bauphysikalische Formeln und Tabellen. Wärmeschutz - Feuchteschutz # Schallschutz, Werner Verlag, Düsseldorf, 2004.

- G.C.O.Lohmeyer, H. Bergmann, M. Post: Praktische Bauphysik. Eine Einführung mit Berechnungsbeispielen, Teubner Verlag, Wiesbaden, 2005.
(zur Vertiefung geeignet)

- W. Fasold / E. Veres: Schallschutz und Raumakustik in der Praxis, HUSS-MEDIEN GmbH, Berlin.
- Musterbauordnung
- Landesbauordnung
- Durchführungsverordnung

- Vorlesungsskript
- Übungsskript

Title	Architecture and Construction		
Number	4199880	**Module version**	
Shorttext	ARC-STD-88	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Baukonstruktion
Hours per Week / ECTS	4 / 5,0	**Module owner**	Prof. Helga Blocksdorf
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	94
Compulsory requirements			
Expected performance/ Type of examination	Portfolio		
Course achievement			

Contents

Lectures:
Building construction vocabulary as an arsenal for structural design. Strategies of structural design in dialogue with engineers. Correlation between structural coherence and architectural expression. Advantages and disadvantages of complex envelope systems: single- and multi-skin, homogenous and layered in terms of breathable buildings.

Exercise:
Analysis and transferral into isometric layouts of key buildings.

Objective qualification

The students are in a position to gauge a building as an interaction between spatial arrangement and circulation, primary structure, building envelope and fit outs. They are familiar with structural systems and their application, and can clarify them terminologically and professionally describe them. They have the skill to apply this knowledge in designing and constructing buildings and to produce the corresponding plan and model presentations.

Literature

Es stehen umfangreiche Merkblätter und Handbücher unter
https://www.tu-braunschweig.de/baukonstruktion zur Verfügung.

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	2,0	Exercise	german
	2,0	Lecture	german

Title	Technical Equipment of Buildings		
Number	4199890	**Module version**	
Shorttext	ARC-STD-89	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Bauklimatik und Energie der Architektur
Hours per Week / ECTS	4 / 5,0	**Module owner**	Prof. Elisabeth Endres
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	94
Compulsory requirements			
Expected performance/ Type of examination	Written exam (120 Min.)		
Course achievement	Portfolio		

Contents

Holistic planning of building technology at a room and whole-building level.
Conventional and regenerative systems for energy generation and distribution (heating, ventilation, cooling).
Basics of electrical planning and building automation.
Observations of daylight and artificial light inside.

Objective qualification

The students are able to plan, design and dimension building technology systems and their components. Students are familiar with the common display and specific vocabulary to communicate with other engineering disciplines.

Literature

-Hausladen, G. et al. (2009): Ausbau Atlas. Integrale Planung, Innenausbau, Haustechnik. Basel, Berlin, München:
Birkhäuser.
-Hausladen, G. (2005): ClimaDesign. Lösungen für Gebäude, die mit weniger Technik mehr können. München: Callwey.
-Neufert, E. (2018): Bauentwurfslehre. Grundlagen Normen Vorschriften. Hg. v. Johannes Kister.
-Bohne, D. (2019): Technischer Ausbau von Gebäuden. Und nachhaltige Gebäudetechnik. Wiesbaden: Springer Vieweg.
-Pistohl, W. et al. (2016): Handbuch der Gebäudetechnik. Band 1&2. Köln: Bundesanzeiger Verlag.
-Zürcher, C. et al. (2018): Bauphysik. Bau und Energie. Zürich: vdf Hochschulverlag AG an der ETH Zürich (Bau und Energie). https://enbau-online.ch/bauphysik/
-Hayner, M. et al. (2011): Faustformel Gebäudetechnik. Für Architekten. München: Dt. Verl.-Anst.
-Albers, K.-J. (Hg.) (2018): Recknagel - Taschenbuch für Heizung und Klimatechnik. Augsburg, Essen: ITM InnoTech
Medien GmbH; Vulkan-Verlag GmbH.

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	4,0	Lecture/Exercise	german

Title	Structural Design - Planning and Fabrication Processes		
Number	4199920	**Module version**	
Shorttext	ARC-STD-92	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Tragwerks-entwurf
Hours per Week / ECTS	4 / 5,0	**Module owner**	Prof. Dr. Harald Kloft
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	94
Compulsory requirements			
Expected performance/ Type of examination	Portfolio or Written exam (120 Min.)		
Course achievement			

Contents

-Classification of TWP in the planning process and differentiation from object planning and TGA
-Basics of HOAI for structural planning: service profiles, classification, fee calculation
-Construction implementation planning: formwork and reinforcement plans, construction overview plans, workshop plans
-3D planning, integral planning, BIM
-Interaction between load-bearing structure, subsoil and foundation
-Interface load-bearing structure to finishing and façade,
-Structural Design in a digital workflow from digital planning to digital fabrication
-Structural principles, design and planning of earth-based construction

Objective qualification

After learning the basics of Load-bearing Structures (TWL) in the first year of study and the competences of Structural Design (TWE) in the second year of study, the aim of the Structural Planning (TWP) course is to familiarise students with the basics of the practical implementation of load-bearing structures into an integral planning environment. In addition to teaching normative and procedural basics for obtaining building permits, the focus is on the classification of structural design in the overall planning process as well as the differentiation from object planning and building services. As a special feature, the emerging trend of earth-based construction is integrated in this module.

Literature

Allgemeine Literaturhinweise unter: www. ite. tu-braunschweig.de. Themenbezogene Literaturhinweise erfolgen in den Lehrveranstaltungen und/oder werden in StudiP zur Verfügung gestellt.

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	4,0	Lecture/Exercise	german
Literature			
Allgemeine Literaturhinweise unter: www.ite.tu-braunschweig.de. Themenbezogene Literaturhinweise erfolgen in den Lehrveranstaltungen und/oder werden in StudIP zur Verfügung gestellt.			

Title	Construction and Technology		
Number	4198240	**Module version**	
Shorttext	ARC-STD2-24	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Bauklimatik und Energie der Architektur Institut für Baukonstruktion Institut für Konstruktives Entwerfen, Industrie- und Gesundheitsbau Institut für Tragwerksentwurf
Hours per Week / ECTS	4 / 6,0	**Module owner**	Prof. Helga Blocksdorf
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	124
Compulsory requirements			
Expected performance/ Type of examination	Term paper or a portfolio with a presentation		
Course achievement			

Contents

Structural design elaboration: development of an integrated building concept as a unified balance between occupancy, construction and design with a main focus on structure, envelope and fit out of the building.
Static–structural design elaboration: development of alternative load-bearing framework systems in different materials; estimated ascertainment and dimensioning of the building elements.
Elaboration of the design in terms of technical fit out and climate services: development of an integrated building concept as a unified balance between architectural design, occupancy demands and building services with a main focus on sustainability and energy efficiency.

Objective qualification

Based on the application of various constructional forms, materials, techniques, means and methods in a concrete design project, the students acquire advanced proficiency in the interaction between design and construction in architecture. This project follows a design-specific development of the materialisation, including the rationale and its ideal presentation, via systematic research, explorations and the evaluation of alternative solution possibilities

Literature

Literatur wird themenbezogen angegeben

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german

Urban and Landscape Design

Title	Urban and Landscape Planning		
Number	4199810	**Module version**	
Shorttext	ARC-STD-81	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	3	**Institution**	Institut für Landschafts-architektur Institut für Nachhaltigen Städtebau Institut für Städtebau und Entwurfsmethodik
Hours per Week / ECTS	6 / 6,0	**Module owner**	Prof. Uwe Brederlau
Workload (h)			
Class attendance (h)	84	**Self studying (h)**	96
Compulsory requirements			
Expected performance/ Type of examination	3 partial assessments 1. Exam (90 min.) for the lecture 'Making City' 2. Portfolio for the lecture 'Fundamentals of Urban Design' 3. Portfolio for the lecture 'Landscape X'		
Course achievement			

Contents

Methodological, factual and normative foundations.
Urban morphologies at different scales and time intervals.
Building types and design methods for urban planning and landscape architecture.

Objective qualification

The students are familiar with the foundations of urban planning, sustainable urbanism and landscape architecture and thus possess the basic knowledge and ability to design in an urban and landscape context. In particular, they have knowledge of the historical development and social function of urban and landscape areas and of the topics concerning future, sustainable urban development. They understand their systematics and morphology. They are acquainted with urban planning characteristics, analysis methods and their possible applications. They can distinguish types and elements of cities and landscape areas. They are trained in dealing with subject-specific vocabulary.

Literature

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	2,0	Lecture	german
	2,0	Lecture	german
	2,0	Lecture	german

Title	Urban and Landscape Planning		
Number	4198250	**Module version**	
Shorttext	ARC-STD2-25	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Landschafts-architektur Institut für Nachhaltigen Städtebau Institut für Städtebau und Entwurfsmethodik
Hours per Week / ECTS	4 / 6,0	**Module owner**	Prof. Uwe Brederlau
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	124
Compulsory requirements			
Expected performance/ Type of examination	Term paper or a portfolio, each one with a presentation (and Discussion)		
Course achievement			

Contents

Students are able to make qualified statements on the urban planning and landscape architecture context in terms of content and form. They possess a sensitivity for urban planning / landscape planning trends, problems, potentials and challenges. They are able to understand and scientifically document design processes and methods in an urban context, as well as to communicate the resulting findings using appropriate media. The goal is to develop and find an independent design methodology for the urban planning and landscape architectural context.

Objective qualification

Scientific work in the field of urban planning and landscape architecture. Methods of research and analysis. Mediation of different views of urban planning or landscape architecture. Provision of supplementary information on disciplines important for urban design. Development of innovative design methods. Communication and documentation of the acquired contents with the help of the technical terminology and appropriate presentation techniques

Literature

Literatur wird themenbezogen angegeben.

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german

Architectural Design

Title	Introduction to Designing 1.1		
Number	4198300	**Module version**	
Shorttext	ARC-STD2-30	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Experimentelles Entwerfen
Hours per Week / ECTS	4 / 6,0	**Module owner**	Prof. Berthold Penkhues
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	124
Compulsory requirements			
Expected performance/ Type of examination			
Course achievement			
Contents			
Objective qualification			
Literature			
u.a. -Ungers, Oswald Mathias, Entwerfen und Denken in Vorstellungen, Metaphern und Analogien aus -Morphologie/CityMetaphors (Köln, 1982) -Wohlhage, Konrad, Ich war der Goldschmied meiner Fesseln aus Baumeister (Januar 2000) -Kleine, Holger, Authentizitätskult aus "Nach dem Bauhaus" (Berlin, 1997) -Valena, Tomas, "Typos und Topos" aus Beziehungen (Berlin, 1994) -Mau, Bruce, An Incomplete Manifesto for Growth aus Life Style (2000) -Arnheim, Rudolf, Gestalt aus Kunst und Sehen (Berlin, 1978) -Vollständige Literaturliste auf Anfrage am Institut für Experimentelles Entwerfen erhältlich.			

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**

	4,0	Lecture	german
	2,0	Exercise	german

Title	Introduction to Designing 1.2		
Number	4198280	**Module version**	
Shorttext	ARC-STD2-28	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Experimentelles Entwerfen
Hours per Week / ECTS	4 / 6,0	**Module owner**	Prof. Berthold Penkhues
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	124
Compulsory requirements			
Expected performance/ Type of examination			
Course achievement			
Contents			
Objective qualification			
Literature			
u.a. -Ungers, Oswald Mathias, Entwerfen und Denken in Vorstellungen, Metaphern und Analogien aus -Morphologie/CityMetaphors (Köln, 1982) -Wohlhage, Konrad, Ich war der Goldschmied meiner Fesseln aus Baumeister (Januar 2000) -Kleine, Holger, Authentizitätskult aus "Nach dem Bauhaus" (Berlin, 1997) -Valena, Tomas, "Typos und Topos" aus Beziehungen (Berlin, 1994) -Mau, Bruce, An Incomplete Manifesto for Growth aus Life Style (2000) -Arnheim, Rudolf, Gestalt aus Kunst und Sehen (Berlin, 1978) -Vollständige Literaturliste auf Anfrage am Institut für Experimentelles Entwerfen erhältlich.			

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	4,0	Lecture	german

	2,0	Exercise	german

Title	Building Design 2		
Number	4199870	**Module version**	
Shorttext	ARC-STD-87	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Entwerfen und Baugestaltung Institut für Entwerfen und Gebäudelehre Institut für Entwerfen und Raumkomposition
Hours per Week / ECTS	4 / 5,0	**Module owner**	Prof. Dan Schürch
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	94
Compulsory requirements			
Expected performance/ Type of examination			
Course achievement			
Contents			
Objective qualification			
Literature			
Literaturempfehlungen beziehen sich fakultativ auf die jährlich wechselnden Themenschwerpunkte.			

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	2,0	Lecture	german
	4,0	Exercise	german
	4,0	Exercise	german

	4,0	Exercise	german

Title	Building Design		
Number	4198260	**Module version**	
Shorttext	ARC-STD2-26	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Entwerfen und Baugestaltung Institut für Entwerfen und Gebäudelehre Institut für Entwerfen und Raumkomposition Institut für Experimentelles Entwerfen
Hours per Week / ECTS	4 / 6,0	**Module owner**	Prof. Dan Schürch
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	124
Compulsory requirements			
Expected performance/ Type of examination	Term paper or a portfolio (each with a presentation)		
Course achievement			

Contents

Architectural analysis: Analysis of individual buildings under the aspects of design and bounding conditions (concept, context, building structure and form, spatial formation and spatial effect, function and content, construction, atmosphere (light and materiality).
Architectural positions: Analysis of current positions and theories of architects as well as of trends and developments in recent architectural history.
Building design: Holistic design, stringency of the concept with regard to the design of the individual architectural elements, (stairs, windows...), of the detailing and the material.
Building planning and design: Building typologies, function and form, aspects of architectural design, analysis of specific building types, analysis of buildings in a specific topographical context, studies made under a specific theme (e.g. architecture and music).
Theory of design: analysis of design aspects (e.g. the site as a design parameter); analysis of design techniques (e.g. with the help of a computer, by working on the model, when designing with analogies), analysis of the design strategies of individual architects.

Objective qualification

The students are aware of the range of problems in design within modernism as well as within individual and relevant positions. They are able to reflect comprehensively on exemplary architectural projects and concepts, i.e. to observe, analyse and discuss the design in the overall cultural context. These are the general and specific conditions under which the architectural design is created, as well as the responsibility of the architect when seen beyond the production of the functionality of the building. They have acquired knowledge of design and building planning and
can integrate these into their own design work.

Literature
Literatur wird themenbezogen angegeben

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german
	4,0	Seminar	german

Design Projects

Title	Project Building Design		
Number	4199990	**Module version**	
Shorttext	ARC-STD-99	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Entwerfen und Baugestaltung Institut für Entwerfen und Gebäudelehre Institut für Entwerfen und Raumkomposition
Hours per Week / ECTS	4 / 10,0	**Module owner**	Prof. Dan Schürch
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	224
Compulsory requirements			
Expected performance/ Type of examination			
Course achievement			
Contents			
Objective qualification			
Literature			
Literatur wird themenbezogen angegeben.			

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Related courses
Rules for the choice of courses
Compulsory attendance

Name of the course	**SWS**	**Eventtype**	**Language**
	4,0	Project	german
	4,0	Project	german

	4,0	Project	german

Title	Project Urban Planning		
Number	4199980	**Module version**	
Shorttext	ARC-STD-98	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Nachhaltigen Städtebau Institut für Städtebau und Entwurfsmethodik
Hours per Week / ECTS	4 / 10,0	**Module owner**	Prof. Uwe Brederlau
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	224
Compulsory requirements	Participation in the courses 'Making City' and 'Fundamentals of Urban Design' in the module 'City + Landscape' (written exam and portfolio preparation).		
Expected performance/ Type of examination	Design with presentation		
Course achievement			

Contents

Urban design: In-depth preparatory work and analysis under various issues, urban studies, concept, development of building typologies, detailed elaboration of urban details, representation and presentation.

Objective qualification

The students are able to understand complex urban constellations and processes and to analyze and evaluate the morphology of the city. They are capable of developing an urban concept in dialogue with the context and to methodically elaborate it into an urban design. The students are also able to present the essential ideas and design contents in a professionally descriptive manner using suitable media. They have the capability to communicate and discuss their design and the specific urban planning aspects relevant to the project. Through frequently recurring presentations, students train their rhetorical skills. In the obligatory teamwork they develop their social competence, cooperation and teamwork skills.

Literature

Literature is given according to the topic

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Related courses

Rules for the choice of courses

Compulsory attendance

Name of the course	SWS	Eventtype	Language
	4,0	Project	german

	4,0	Project	german

Title	Project Constructional Design		
Number	4198010	**Module version**	
Shorttext	ARC-STD2-01	**Language**	german
Frequency of offer		**Teaching unit**	
Module duration	1	**Institution**	Institut für Baukonstruktion Institut für Konstruktives Entwerfen, Industrie- und Gesundheitsbau Institut für Tragwerksentwurf
Hours per Week / ECTS	4 / 10,0	**Module owner**	Prof. Helga Blocksdorf
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	244
Compulsory requirements			
Expected performance/ Type of examination	Presentation		
Course achievement			

Contents

- Design and planning of a building with differentiated spatial and functional requirements.
- Development of primary structure, building envelope and fit out; geometric arrangement and combination of the constructions structures.
- Application of design and planning strategies in a structured planning process.

Objective qualification

The students are in the position to apply fundamental construction knowledge and skills in a building design. They are able to integrate the aspects of spatial arrangement and circulation and the structural organisation of a building as a primary structure, building envelope and fit out into an architectural concept. They are capable of incorporating specialist technical-structural understanding of framework planning, material sciences, structural physics and building technology into the design process. Moreover, the students have the ability to professionally and cogently present the core ideas and design content using appropriate medias. They can communicate and discuss their design, as well as the specific structural aspects relevant to the project. The students also school their rhetorical skills via frequently recurring presentations.

Literature

Literatur und Fachzeitschriften werden themenbezogen angegeben.
http://www.igs.bau.tu-bs.de/
http://www.ite.tu-bs.de/
http://www.iike.tu-bs.de/
http://www.tu-bs.de/baukonstruktion
bzw. Semesterapparate der TU-Bibliothek

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	4,0	Project	german
	4,0	Project	german
	4,0	Project	german

Title	Short Term Architectural Design Project		
Number	4198020	**Module version**	
Shorttext	ARC-STD2-02	**Language**	german
Frequency of offer		**Teaching unit**	Fakultät Architektur, Bauingenieurwesen und Umweltwissenschaften
Module duration	1	**Institution**	
Hours per Week / ECTS	2 / 6,0	**Module owner**	
Workload (h)			
Class attendance (h)	30	**Self studying (h)**	150
Compulsory requirements			
Expected performance/ Type of examination			
Course achievement			
Contents			
Objective qualification			
Literature			
Literatur wird themenbezogen angegeben.			

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	2,0	Project	german
	2,0	Project	german
	2,0	Project	german
	2,0	Project	german
	2,0	Project	german

	2,0	Project	german
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	2,0	Project	german
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	2,0	Project	german
	2,0	Project	german
	2,0	Project	german

Title	Impromptu Design - Short-term Design Projects		
Number	4198030	**Module version**	
Shorttext	ARC-STD2-03	**Language**	german
Frequency of offer		**Teaching unit**	Fakultät Architektur, Bauingenieurwesen und Umweltwissenschaften
Module duration	3	**Institution**	
Hours per Week / ECTS	3 / 4,0	**Module owner**	
Workload (h)			
Class attendance (h)	14	**Self studying (h)**	106
Compulsory requirements			
Expected performance/ Type of examination			
Course achievement			
Contents			
Objective qualification			
Literature			

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Related courses			
Rules for the choice of courses			
Compulsory attendance			
Name of the course	**SWS**	**Eventtype**	**Language**
	0,5	Exercise	german
	0,5	Exercise	german
	0,5	Exercise	german
	0,5	Exercise	german
	0,5	Exercise	german

	0,5	Exercise	german
	0,5	Exercise	german
	0,5	Exercise	german
	0,5	Exercise	german
	0,5	Exercise	german
	0,5	Exercise	german
	0,5	Exercise	german
	0,5	Exercise	german
	0,5	Exercise	german

General Qualifications

Title	Key Qualifications and Professional Skills		
Number	4198200	**Module version**	
Shorttext	ARC-STD2-20	**Language**	german
Frequency of offer		**Teaching unit**	Fakultät Architektur, Bauingenieurwesen und Umweltwissenschaften
Module duration	1	**Institution**	
Hours per Week / ECTS	12 / 10,0	**Module owner**	
Workload (h)			
Class attendance (h)	168	**Self studying (h)**	132
Compulsory requirements			
Expected performance/ Type of examination			
Course achievement			
Contents			
Objective qualification			
Literature			

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Related courses
Rules for the choice of courses
Compulsory attendance

Name of the course	SWS	Eventtype	Language
architectural positions	2,0	Lecture series	german
	2,0	Lecture	german
	2,0	Lecture/Exercise	german

	2,0	Exercise	german
	4,0	Workshop	german
	2,0	Lecture	german
	4,0	Workshop	german
	4,0	Workshop	german
	2,0	Lecture/Exercise	german
		Project	german
	2,0	Lecture/Exercise	german
	2,0	Lecture/Exercise	german
		Project	german
		Project	german
		Project	german
		Project	german
		Project	german
		Project	german
		Project	german
		Project	german
		Exercise	german
		Exercise	german
		Exercise	german
		Exercise	german
		Exercise	german
		Exercise	german
	1,0	Exercise	german
		Lecture/Exercise	german
		Exercise	german
		Project	german
		Exercise	german
	1,0	Workshop	german
		Excursion	german

		Excursion	german
		Excursion	german
		Excursion	german
		Excursion	german
		Excursion	german
		Excursion	german
		Excursion	german
	1,0	Excursion	german

Field of Graduate Study

Title	Bachelor Design Project		
Number	4198050	**Module version**	
Shorttext	ARC-STD2-05	**Language**	german
Frequency of offer		**Teaching unit**	Fakultät Architektur, Bauingenieurwesen und Umweltwissenschaften
Module duration	1	**Institution**	
Hours per Week / ECTS	4 / 14,0	**Module owner**	
Workload (h)			
Class attendance (h)	56	**Self studying (h)**	354
Compulsory requirements			
Expected performance/ Type of examination			
Course achievement			
Contents			
Objective qualification			
Literature			
Literatur wird themenbezogen angegeben.			

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Related courses
Rules for the choice of courses
Compulsory attendance

Name of the course	**SWS**	**Eventtype**	**Language**
	4,0	Bachelor's thesis	german
	4,0	Bachelor's thesis	german
	4,0	Bachelor's thesis	german

	4,0	Bachelor's thesis	german
	4,0	Bachelor's thesis	german
	4,0	Bachelor's thesis	german
	4,0	Bachelor's thesis	german
	4,0	Bachelor's thesis	german
	2,0	Bachelor's thesis	german
		Bachelor's thesis	german
	2,0	Bachelor's thesis	german
	4,0	Bachelor's thesis	german