FRANKFURT UNIVERSITY OF APPLIED SCIENCES

Module Handbook

of the study program

Advanced Architecture - From Urban Design to Building Construction

Master of Science (M.Sc.)
Faculty 1: Architektur · Bauingenieurwesen · Geomatik –
Architecture · Civil Engineering · Geomatics

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1. General Qualification Profile of the Program

The study program "Advanced Architecture – From Urban Design to Building Construction" (from here on abbreviated: Advanced Architecture) offers a master's degree (Master of Science) that concentrates on the German combination of "Architecture and Technique" and "Architecture and Design" in a generalized mode, which are usually taught separately in other countries. "Advanced Architecture" means designing and constructing on different scales, from urban contexts to detail. In this sense, Advanced means that future-oriented concepts are developed and worked through in study projects and part wise also in office internships or in collaboration with the FFin (Frankfurt Research Institute)

The study program qualifies for the process of design from concept to detail. Students will be able to work in particular on the interface between abstract designs and concrete realizations. This means a focus on the planning phase, referred to in the german fee schedule as "execution planning", with feedback on the design process and in close connection with current developments of scientific research towards design and construction.

Possible occupational fields are in the area of freelance activity and employee relations in senior or leading positions, ranging from urban design to building construction (administration, government, property, real estate and facility management companies, universities, research facilities). Specializations within the study program lead to different activities, for example, in the field of repairs and preservation of monuments, facade planning, energetic building, lightweight construction, from building construction to urban development.

After successfully completed studies the students are able to/ have the abilities to:

- develop and elaborate strategies and concepts for national and international themes of high complexity in the field of urban development, construction in existing buildings and new buildings.
- develop and elaborate these strategies and concepts starting from a clear urban and architectural concept under consideration of the urban context, including both built and open spaces, the relevant urban and architectural typologies, and their technical and material implementation up to detailed construction drawings for buildings
- develop and elaborate these strategies and concepts on a compulsory subject matter of high complexity in an interdisciplinary cooperation of study fields, together with students and lecturers from other disciplines and universities.
- independently develop "Advanced Architecture" designs, within the overall complexity of an urban environment and taking into account the respective cultural, historical and climatic situation.
- translate this design independently into material and construction on a professional basis
- apply the design and translation of the design to contexts and themes of building in existing structures as well as new buildings.
- work in projects, take responsibility in teamwork and leadership and to be able to present their design in different academic ways to professionals and laypersons.
- determine autonomously complex cause-and-effect relationships, as well as reflecting architectural contexts and problems.
- identify the needs of society / customers / partners / users, etc. in the design of buildings and to provide adequate solutions for these needs in terms of service, sustainability and quality (such as consideration of cost factors and building regulations, etc.).
- offer appreciation towards the company / customers, partners, users, etc.; They neglect neither their own particular responsibility, nor ignore sound social, scientific, or ethical knowledge, but rather evaluate them differently.
- design further self-learning processes on an independent basis.

In addition, students acquire the scientific qualification for architectural and urban research and doctoral studies. The Frankfurter Forschungsinstitut FFIN and TRAX also offer special on-site opportunities to involve students in ongoing research projects, to learn and deepen profound scientific work through either application-oriented research in the field between design and construction, or to accompany the actual realization of concepts in practice.

The study program complies with UIA standards (Union of International Architects). The course of study has passed through the European Commission's notification procedure and provides a prerequisite for entry into the German Chamber of Architects.

Further Information is available under: https://frankfurt-university.de/fachbereiche/fb1.html

2. Recommended course of studies

Advanced Architecture (M.Sc.)						
Module Overview					Stand: 11.01.2017	ECTS Credit Points (cp)
Semester 4	Master-Thesis with colloquium 30 cp					30
Semester 3	Specialisation Project 10 cp		Existing Contexts - Design and Construction 10 cp	WPM 5 cp	WPM 5 cp	30
Semester 2	Lecture Series Construction 5 cp	International Design Project 5 cp	New Buildings - Design and Construction 10 cp	WPM 5 cp	WPM 5 cp	30
Semester 1	Lecture Series Design 5 cp	Impromptu Designs 5 cp	Urban Contexts- Design and Construction 10 cp	International Design and Building Project 10 cp		30

2. ECTS-/Workload-Overview

(Modules – ECTS – Weighting – Duration – Type of examination – Language of Module)

Nr.	Title of Modules	Cp ECTS	Weighting	Duration [Sem.]	Type of examination	Language
LD	Lecture Series Design	5	5	1	Written examination in form of a test	English
ID	Impromptu Designs	5	5	1	Written examination in form of a term paper	English
UDC	Urban Contexts - Design and Construction	10	10	1	Project work with oral presentation	English
IDBP	International Design and Building Project	10	10	1	Project work with oral presentation	English
LC	Lecture Series Construction	5	5	1	Written examination in form of a test	English
IDP	International Design Project	5	5	1	Project work with oral presentation	English
NDC	New Buildings - Design and Construction	10	10	1	Project work with oral presentation	English
SP	Specialisation Project	10	10	1	Project work with oral presentation	English
EDC	Existing Contexts- Design and Construction	10	10	1	Project work with oral presentation	English
T	Master-Thesis	30	60	1	Master-Thesis with colloquium	English
	Optional Modules					
WPM 7	Utopias und Visions	5	5	1	Written examination in form of a term paper	English
WPM 8	Rehabilitate, Reuse, Add-on	5	5	1	Written examination in form of a term paper	English
WPM 9	Urban Development and District Planning	5	5	1	Written examination in form of a term paper	English
WPM 10	Urban Renewal and Redevelopment	5	5	1	Written examination in form of a term paper	English
WPM 11	DigitalAnalog	5	5	1	Written examination in form of a term paper	English
WPM 12	Experimental Design	5	5	1	Written examination in form of a term paper	English
WPM 14	Structural Design	5	5	1	Written examination in form of a term paper	English

Nr.	Title of Modules	Cp ECTS	Weighting	Duration [Sem.]	Type of examination	Language
WPM 17	Material Design	5	5	1	Written examination in form of a term paper	English
WPM 18	Climate Design	5	5	1	Written examination in form of a term paper	English

3. Descriptions of the modules

Description of the module

Module title	**Lecture Series Design**
Module number	LD
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	None
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: First semester
Status of the module	Compulsory module
ECTS/ Credit points (cp) / Workload (h)	5 cp / 150 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Written exam in the form of a test, duration 2 hours
Learning outcomes and skills	The students can distinguish the different approaches to achieving an architectural design approach which can respond convincingly to today's requests as manifold they are. Starting from historical foundations such as "architecture without architects" in different climate zones, students can evaluate critically centuries-old approaches to spatial design, and in particular those which are connected with the European 20th century and are still recognized today. This includes the knowledge of concepts like general principles for spatial planning, composition principles, spatial exploration principles and material concepts. Particularly in connection with the topic of materials, the students can distinguish the effects of the selection of materials on the construction and shape of the atmospheric qualities of spaces, as well as on the technical aspects of construction.
Contents of the module	Lecture series Design: Lecture series on spatial design
Teaching Methods of the module	Lecture
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	Alternating, see unit
Further information	None

Description of the unit

Name of unit	Lecture series Design: Lecture series on spatial design
Code	
Name of module	Lecture Series Design
Contents of the Unit	Contents of the lecture series are the way in which architectural designs are developed and elaborated, starting with the spatial design concept, through the conceptual opening up of new spatial resources and into the definition of adequate materials. This is concerned both with the urban design, the (re)design of existing structures and conversion of existing buildings as well as with the design of new buildings. Both historically different developments are considered, beginning with the building without architects in climatically different climate zones, as well as culturally and geographically oriented approaches up to the present time. Here in particular the focus is on current design principles and theories of important architects and urban architects of the 20th and 21st century.
Teaching Methods	Lecture
Contact hours per week (SWS)	4 SWS
Total Workload of the Unit (h)	150
Total time of contact hours (h)	60
Total time of examination incl. preparation (h)	30
Total time of self-study (h)	60
Total time of practical training (h)	0
Language of the Unit	English
Lecturer	N.N.; Prof. Claudia Lüling, Prof. Carsten Rohde, Prof. Anett Zinsmeister
Recommended Reading	Design Strategies in Architecture: An Approach to the Analysis of Form, Geoffrey H. Baker (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	None

Description of the module

Module title	**Impromptu Designs**
Module number	ID
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	None
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: First semester
Status of the module	Compulsory module
ECTS/ Credit points (cp) / Workload (h)	5 cp / 150 h (PO)
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Written examination in form of a term paper, Processing time: 12 weeks
Learning outcomes and skills	Students can conceptually solve an architectural problem impromptu. These problems derive from the three main program areas, which are urban contexts, existing contexts, and new buildings. The maximum time given for the impromptu design is two weeks. The student is able, in this short time at disposition, to name and elaborate the design criteria adequate to the task given, develop a concept, in scales ranging from 1:2000 to 1:1, and present this appropriately in plans and / or models, to laymen and experts.
Contents of the module	Impromptu Designs: Solving an architectural-relevant task in the form of an Impromptu Design
Teaching Methods of the module	Seminar, Practice
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	Alternating, see unit
Further information	None

Description of the unit

Name of unit	Impromptu Designs: Solving an architectural-relevant task in the form of an Impromptu Design
Code	
Name of module	Impromptu Designs
Contents of the Unit	The main focus of the unit is the fast, short-term processing of an architectural-spatial topic unknown to the students until the work task is given. Topics can vary from the intervention into an urban context to the conversion of existing buildings and the design of new buildings to the building of objects and furniture. A total of five impromptu designs have to be processed in the unit.
Teaching Methods	Seminar, Practice
Contact hours per week (SWS)	2
Total Workload of the Unit (h)	150
Total time of contact hours (h)	30
Total time of examination incl. preparation (h)	40
Total time of self-study (h)	110
Total time of practical training (h)	-
Language of the Unit	English
Lecturer	N.N.
Recommended Reading	Will be announced by the lecturer at the beginning of the seminar
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	None

Description of the module

Module title	**Urban Contexts - Design and Construction**
Module number	UDC
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	Architektur (M.A.), Urban Agglomerations (M.Sc.), Umweltmanagement und Stadtplanung in Ballungsräumen (M. Eng.)
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: First semester
Status of the module	Compulsory module
ECTS/ Credit points (cp) / Workload (h)	10 cp / 300 h (PO)
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Project work with oral presentation, Processing time: 12 weeks, Duration of presentation min. 10 min, max. 20 min
Learning outcomes and skills	Students can develop, elaborate and materialize a concept for a design topic of high complexity in the urban context. They are able to independently research and elaborate the essential aspects of urban history and development, urban and architectural typologies, functional structuring, open space development, material and technical developments, as well as analyzing and methodically evaluating their design concepts while framing them in relation to contemporary urban context related issues and developments. Furthermore they are able to develop their design work from design up to all relevant urban, architectural and technical questions by including the necessary expertise and present their design in different ways – appropriate to the stage of project development – in front of professionals and laypersons.
Contents of the module	Urban Contexts – Design and Construction: Urban Design and Implementation
Teaching Methods of the module	Seminar, Practice
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	Prof. Dr. Michael Peterek / Prof. Dr. Maren Harnack
Further information	None

Description of the unit

Name of unit	Urban Contexts – Design and Construction: Urban Design and Implementation
Code	
Name of module	Urban Contexts - Design and Construction
Contents of the Unit	The main focus of the Unit „Urban Contexts – Design and Implementation“ lies on the conception of a clear urban and architectural concept under consideration of the urban context, including both built and open spaces, the relevant urban and architectural typologies, and their technical and material implementation. Particular attention is given to the question of how to respond in an adequate and sustainable form to the existing spatial, functional and infrastructural contexts of the proposed design and of how to create new and livable contexts. The students acquire knowledge by deepening their design vision into concepts for urban, architectural and material implementation and by thinking in alternatives. The emphasis is on the interrelationships between the former and the newly created urban context, between the architectural interventions and the urban space, between public and private uses and spaces, between the built forms and the material and atmospheric qualities.
Teaching Methods	Seminar, Practice
Contact hours per week (SWS)	5
Total Workload of the Unit (h)	300
Total time of contact hours (h)	75
Total time of examination incl. preparation (h)	10
Total time of self-study (h)	215
Total time of practical training (h)	None
Language of the Unit	English
Lecturer	Prof. Dr. Michael Peterek / Prof. Dr. Maren Harnack
Recommended Reading	L. Schenk, Designing Cities. Basics, Principles, Projects. Basel T. Bürklin and M. Peterek, Urban Building Blocks. Basel Fred Koetter and Colin Rowe: Collage City. Cambridge (Mass.) (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	None

Description of the module

Module title	**International Design and Building Project**
Module number	IDBP
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	None
Duration of the Module	1
Recommended semester in program	Freely selectable, recommended: 1
Status of the module	Compulsory module
ECTS/ Credit points (cp) / Workload (h)	10 cp / 300 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Project work with oral presentation, Processing time: 12 weeks, Duration of presentation min 10 min, max. 20 min
Learning outcomes and skills	Students can develop and elaborate strategies and concepts for an international theme of high complexity in the fields of urban development, construction in existing buildings and new buildings. They are able to cooperate and work with students and professors from other disciplines and international universities. These co-operation partners bring diverse expertise and different approaches to the international co-operations. In this work environment, the students can research and analyze the thematic aspects that are essential in the respective semester. On this basis, they can develop strategies and concepts and methodically evaluate them in comparison with the currently relevant developments in the respective thematic area. Students can do this independently, either in international student groups both in distant classrooms via digital teaching and studying tools, or in the frame of a joint international workshop with the respective partner universities. The students can present their seminar works in these contexts to national and international experts as well as laymen in an appropriate way and further elaborate them with their support.
Contents of the module	International Design and Building Project
Teaching Methods of the module	Seminar, Practice
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	Prof. Claudia Lüling
Further information	None

Description of the unit

Name of unit	International Design and Building Project
Code	
Name of module	International Design and Building Project
Contents of the Unit	The main focus of the architectural design and realization project in an international context is the interrelation between architectural design and architectural technique. For this purpose, internationally relevant design themes are worked out for the areas of new buildings or existing structure, right up to the realization of models of details on the scale of 1: 1, depending on the subject in cooperation with partner universities and students on site. The focus is always on the cultural, climatic and technical conditions analyzed on the basis of the fundamental research depending on the respective topic and location and the appropriate and sustainable management of our built environment.
Teaching Methods	Seminar, Practice
Contact hours per week (SWS)	5
Total Workload of the Unit (h)	300
Total time of contact hours (h)	75
Total time of examination incl. preparation (h)	10
Total time of self-study (h)	150
Total time of practical training (h)	65
Language of the Unit	English
Lecturer	Prof. Claudia Lüling
Recommended Reading	Chad Kraus (Editor), Designbuild Education (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	None

Description of the module

Module title	**Lecture Series Construction**
Module number	LC
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	None
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: Second semester
Status of the module	Compulsory module
ECTS/ Credit points (cp) / Workload (h)	5 cp / 150 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Written exam in the form of a test, duration 2 hours
Learning outcomes and skills	The students can distinguish the diverse criteria, which determine the transfer of a design approach into an adequate design form. They can evaluate critically these criteria and are able to transfer these on this basis into the current discussion. For this purpose students will be able to discuss and analyze central topics which have significantly influenced the discussion of architecture and its construction in the 19th and 20th centuries. These are, in particular, the following: perception and structural rationalism, craftmanship, and ornament and construction. Students will learn to differentiate between concepts of material efficiency, structure equals architecture, transparency, monolithic construction, and standardization. Finally, the students can understand and reflect the manifold relationships between the design ideals and the reality/realities of construction into which these ideas have been translated and are still being translated.
Contents of the module	Lecture series Construction: Lecture series on construction design
Teaching Methods of the module	Lecture
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	Prof. Dr. Wolfgang Jung, Prof. Jean Heemskerk, Prof. Dr. Holger Techen
Further information	None

Description of the unit

Name of unit	Lecture series Construction: Lecture series on architectural construction
Code	
Name of module	Lecture Series Construction
Contents of the Unit	In the Lecture Series Construction, the interrelationship between design and its constructive implementation is primarily viewed, examined and evaluated from the viewpoint of constructive implementation. The same attention is given to the main focus of the course, urban contexts, existing building structures and new buildings. Starting points are the identification of the most important persons involved in the planning process and the study of their different demands, work approaches and decision-making criteria regarding the structural development of the structure, building envelope and interior design. In terms of content, the required profile of use and the urban / architectural response are correspondingly compared with the possible constructive implementations. This includes also the decision-making process of the adequate materials, from the best design form to the evaluation of the efficiency, costs and the shape of a construction, as well as the construction and maintenance costs, life cycles and energy efficiency, regulations and legal questions. These parameters are related to the conceptual design approach and the desired shape quality.
Teaching Methods	Lecture
Contact hours per week (SWS)	4 SWS
Total Workload of the Unit (h)	150
Total time of contact hours (h)	60
Total time of examination incl. preparation (h)	30
Total time of self-study (h)	60
Total time of practical training (h)	None
Language of the Unit	English
Lecturer	Prof. Dr. Wolfgang Jung, Prof. Jean Heemskerk, Prof. Dr. Holger Techen
Recommended Reading	Edward R. Ford, The Details of Modern Architecture, Volume 1: 1890-1932, Volume 2: 1928-1988 Andrea Deplazes (Hrsg.), Architektur konstruieren, 3. Auflage, Stuttgart 2005 Peter Cheret (Hrsg.), Baukonstruktionslehre, Berlin 2010 (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	None

Description of the module

Module title	**International Design Project**
Module number	IDP
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	None
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: Second semester
Status of the module	Compulsory module
ECTS/ Credit points (cp) / Workload (h)	5 cp / 150 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Project work with oral presentation, Processing time: 12 weeks, Duration of presentation min 10 min, max. 20 min
Learning outcomes and skills	Students are able to develop and elaborate strategies and concepts on a compulsory subject matter of high complexity in an interdisciplinary cooperation of study fields, together in possible cooperations with students and professors from other disciplines and international universities. These co-operation partners bring diverse expertise and different approaches to the international co-operations. The students in this working environment are able to research and analyze the thematic aspects that are essential in the respective semester. On this basis, they can develop strategies and concepts and are able to do a methodically correct evaluation, which puts these topics in comparison with the currently relevant developments in the respective subject field. The students can implement these strategies and concepts independently, and act in international student groups. The implementation is either done in the virtual space or in the frame of a joint international workshop with the respective partner universities. The students can present their seminar works in these contexts to national and international experts as well as laymen in an appropriate way and develop them further together with them.
Contents of the module	International Design Project
Teaching Methods of the module	Seminar, Practice
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	Prof. Dr. Wolfgang Jung
Further information	None

Description of the unit

Name of unit	International Design Project
Code	
Name of module	International Design Project
Contents of the Unit	The focus of the design project in cooperation with international partner universities is determined by the individual, international semester topic. The topics are the following: city, building in existing buildings, new buildings, depending on the general subject chosen in cooperation with the partner universities. In all three thematic areas, the fundamental questions about the socially appropriate and sustainable handling of our built environment are at the forefront.
Teaching Methods	Seminar, Practice
Contact hours per week (SWS)	3
Total Workload of the Unit (h)	150
Total time of contact hours (h)	45
Total time of examination incl. preparation (h)	10
Total time of self-study (h)	95
Total time of practical training (h)	None
Language of the Unit	English
Lecturer	Prof. Dr. Wolfgang Jung
Recommended Reading	Convertible City, Formen der Verdichtung und Entgrenzung, hrsg. Armand Gruentuch + Almut Ernst, Arch+ Verlag 2006 Reduce, Reuse, Recycle - Ressource Architektur. Rethink Architecture. German Pavilion 2012 (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	None

Description of the module

Module title	**New Buildings- Design and Construction**
Module number	NDC
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	Architektur (M.A.)
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: Second semester
Status of the module	Compulsory module
ECTS/ Credit points (cp) / Workload (h)	10 cp / 300 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Project work with oral presentation, Processing time: 12 weeks, Duration of presentation min. 10 min, max. 20 min
Learning outcomes and skills	Students can develop and elaborate a concept for a design topic of high complexity in the area of new buildings. They can independently research the essential aspects, analyze and methodically evaluate their design concepts while framing their work in relation to spatial-atmospheric, architectural, building-type relevant, material and technical developments. Furthermore they are able to develop their design work from design up to all relevant architectural and technical-constructive questions by including the necessary expertise and present their design in different ways - appropriate to the stage of project development - in front of professionals and laypersons.
Contents of the module	New Buildings – Design and Construction: Architectural concepts and their materialization
Teaching Methods of the module	Seminar, Practice
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	Prof. Jean Heemskerk
Further information	None

Description of the unit

Name of unit	New Buildings – Design and Construction: Architectural concepts and their materialization
Code	
Name of module	New Buildings- Design and Construction
Contents of the Unit	The main focus of the Unit “From Design to Construction: New Buildings” lies on the development of a clear architectural concept, the quality of its spatial and atmospheric composition and the elaboration of material, technical and constructive means in order to demonstrate the spatial-atmospheric qualities envisioned. Particular attention is given to the question of how to respond in an adequate and sustainable form to today’s requests and of how to create new and livable contexts. The students acquire knowledge by deepening their design vision into building-constructive design and thinking in alternatives. The emphasis is on the interrelationship between use and space versus material, form versus bearing construction, atmospheric qualities versus the envelope of a building.
Teaching Methods	Seminar, Practice
Contact hours per week (SWS)	5
Total Workload of the Unit (h)	300
Total time of contact hours (h)	75
Total time of examination incl. preparation (h)	10
Total time of self-study (h)	215
Total time of practical training (h)	None
Language of the Unit	English
Lecturer	Prof. Jean Heemskerk
Recommended Reading	Frederick S. Merritt, Jonathan T. Ricketts, Building Design and Construction Handbook Klaus Bollinger, Manfred Grohmann, Markus Feldmann, Georg Giebeler, Daniel Pfanner, Martin Zeumer (Hrsg.) Atlas moderner Stahlbau, München 2011 Martin Peck, Atlas moderner Betonbau, München 2013 (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	None

Description of the module

Module title	**Specialisation Project**
Module number	SP
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	None
Duration of the Module	1 semester
Recommended semester in program	Third semester
Status of the module	Compulsory module
ECTS/ Credit points (cp) / Workload (h)	10 cp / 300 h (PO)
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	Lecture Series Construction and Lecture Series Design
Module examination	Project work with oral presentation, Processing time: 12 weeks, Duration of presentation minimum 10 minutes maximum 20 minutes
Learning outcomes and skills	The student can independently formulate, investigate, elaborate, and present a topic of relevance for the fields of working in urban contexts, in existing contexts and on new buildings. These topics, which have to present very high planning requirements, can be investigated with a predominantly theoretical approach or elaborated in form of a concrete implementation project. The theoretical research puts the student into the position to do scientific research, which here comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge, here knowledge of architecture, culture and society, and the use of this stock of knowledge to devise new applications. Whereas the elaboration of an implementation project puts the student into the position to carry out a plan, a method, or a design, idea, model, or specification up to the scale of a one to one detail.. Students will finally be able to present, discuss and further develop their work in the context of a high level of expertise.
Contents of the module	Specialisation Project
Teaching Methods of the module	Seminar
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	N.N.
Further information	The topic of relevance for the fields of working in urban contexts, in existing contexts and on new buildings can be developed either from one of the modules (compulsory or optional modules) already taken by the students, or it can be developed in relation to the ongoing projects of the Frankfurt Research Institute FFin). For this purpose, the students can also work in a German office in the form of an internship, or participate in a research project at the FFin. This intensive research project or implementation project can serve as a basis for the subsequent thesis work of the student.

Description of the unit

Name of unit	**Specialisation Project**
Code	
Name of module	Specialisation Project
Contents of the Unit	The main focus of the architecture-relevant topic of the module is defined by the students independently and according to their own priorities and interests. The chosen theme can be developed either with a predominantly theoretical approach, or elaborated in form of a concrete implementation project. The content is based on topics that have been elaborated in the compulsory and optional modules, in which the students participated up to this point in time and which are now deepened. As an alternative, the students can also work on new themes relevant to architecture, which can be related to topics of the FFin.
Teaching Methods	Seminar
Contact hours per week (SWS)	5
Total Workload of the Unit (h)	300
Total time of contact hours (h)	75
Total time of examination incl. preparation (h)	10
Total time of self-study (h)	135
Total time of practical training (h)	80
Language of the Unit	English
Lecturer	N.N.
Recommended Reading	Will be announced by the lecturer at the beginning of the seminar
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	None

Description of the module

Module title	**Existing Contexts- Design and Construction**
Module number	EDC
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	Architektur (M.A.)
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: Third semester
Status of the module	Compulsory module
ECTS/ Credit points (cp) / Workload (h)	10 cp / 300 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Project work with oral presentation, Processing time: 12 weeks, Duration of presentation min. 10 min, max. 20 min
Learning outcomes and skills	Students can develop and elaborate a concept for a design topic of high complexity in the area of existing buildings. They can independently research the essential aspects from building history to cultural aspects, analyze and methodically evaluate their design concepts while framing their work in relation to building-type relevant, material and technical developments as well as actual concepts such as Reduce, Reuse, Re-Cycling. Furthermore they are able to develop their design work from design up to all relevant architectural and technical-constructive questions by including the necessary expertise and present their design in different ways - appropriate to the stage of project development - in front of professionals and laypersons.
Contents of the module	Existing Structures - Design and Construction: Re-Design and Conversion
Teaching Methods of the module	Seminar, Practice
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	Prof. Dr. Wolfgang Jung
Further information	None

Description of the unit

Name of unit	Existing Structures - Design and Construction: Re-Design and Conversion
Code	
Name of module	Existing Contexts- Design and Construction
Contents of the Unit	The main focus of the Unit “From Redesign to Conversion: Existing Buildings” lies on the development of a clear architectural concept under consideration of the existing building structure, the quality of its spatial and atmospheric composition and the elaboration of material, technical and constructive means. Particular attention is given to the question of how to respond in an adequate and sustainable form to the requests of existing contexts, listed and protected and not, and of how to create new and livable contexts. The students acquire knowledge by deepening their design vision into building-constructive design and thinking in alternatives. The emphasis is on the interrelationship between the former and the new use and the redesign of the building, thereby the interrelation between space versus material, form versus bearing construction, atmospheric qualities versus the envelope of a building.
Teaching Methods	Seminar, Practice
Contact hours per week (SWS)	5
Total Workload of the Unit (h)	300
Total time of contact hours (h)	75
Total time of examination incl. preparation (h)	10
Total time of self-study (h)	215
Total time of practical training (h)	None
Language of the Unit	English
Lecturer	Prof. Dr. Wolfgang Jung
Recommended Reading	Convertible City, Formen der Verdichtung und Entgrenzung, hrsg. Armand Gruentuch + Almut Ernst, Arch+ Verlag 2006 Reduce, Reuse, Recycle - Ressource Architektur. Rethink Architecture. German Pavilion 2012 (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	None

Description of the module

Module title	**Master-Thesis with colloquium**
Module number	T
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	None
Duration of the Module	1 semester
Recommended semester in program	Fourth semester
Status of the module	Compulsory module
ECTS/ Credit points (cp) / Workload (h)	30 cp / 900 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	All Compulsory Modules and 4 Optional Modules.
Module examination	Master-Thesis with colloquium. Processing time is 18 weeks, the duration of the colloquium is at least 20 and at most 40 minutes.
Learning outcomes and skills	The students are able to work independently according to specific scientific methods in architecture within a fixed time frame on a task for a design of highest complexity, taking into account the special focus of the study program "Advanced Architecture - From Urban Design to Building Construction". The student can recognize and evaluate the possibilities and limits of the assignment outlined. The student can research open questions, develop a concept and develop the draft on this basis into a coherent assignment, which will then be the assignment of the student's master thesis. The students can develop a convincing solution for their conceptual formulation in its complex variety. They are able to reflect the context of their work within the framework of comparable questions as well as to incorporate knowledge from other related disciplines (such as statics or building physics). The students are also able to develop alternative approaches for the main questions of their concepts as well as to identify the respective potentials of their concepts. The students are able to present the results of their work visually, both two and three-dimensionally, as well as orally.
Contents of the module	Thesis Theory and Thesis– Development of a Master Thesis
Teaching Methods of the module	Seminar and Self-Study
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	wechselnde Lehrende
Further information	The starting point for this is an assignment chosen from the subject areas of the master-course, which are urban contexts, existing contexts and new buildings. This assignment is to be developed and formulated within the framework of the examination unit "Thesis Theory". The assignment is initially only given in its corner points and must be supplemented within the framework of the unit Thesis Theory.

Description of the unit

Name of unit	Master-Thesis with colloquium
Code	
Name of module	Master-Thesis with colloquium
Contents of the Unit	Content of the module is the independent development of a project for a task of highest complexity deriving from the fields of urban design, building in existing contexts or designing new buildings. The development of this project starts with the formulation of the specific task. This also includes the scientific work required for this: the definition and evaluation of relevant parameters relating to the urban context and urban development, the building history and the building typology, or material and construction and other parameters relevant to the chosen topic. The development of the project aims then – on these grounds - for a convincing solution, which is able to respond to the task's complex variety.
Teaching Methods	Seminar and Self-Study
Contact hours per week (SWS)	2
Total Workload of the Unit (h)	900
Total time of contact hours (h)	30
Total time of examination incl. preparation (h)	10
Total time of self-study (h)	270
Total time of practical training (h)	None
Language of the Unit	English
Lecturer	Prof. Dr. Maren Harnack, Prof. Jean Heemskerk, Prof. Dr. Wolfgang Jung, Prof. Claudia Lüling, Prof. Dr. Michael Peterek, Prof. Carsten Rohde, Prof. Dr. Hans Jürgen Schmitz, Prof. Dr. Holger Techen, Prof. Anett Zinsmeister
Recommended Reading	Will be announced by the lecturer at the beginning of the seminar
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	None

Description of the module

Module title	**Utopias and Visions**
Module number	WPM 7
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	Architektur (M.A.)
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: Second semester
Status of the module	Optional Module
ECTS/ Credit points (cp) / Workload (h)	5 cp / 150 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Written examination in form of a term paper, Processing time: 6 weeks
Learning outcomes and skills	The students acquire detailed knowledge in the thematic field of *Visions and Utopias*. Students are enabled through the practical application of the gained knowledge to evaluate topics in the field of architectural theory and to further develop them on the grounds of the specific contexts and conditions. Furthermore, the students acquire abilities to exchange problems and solutions with expert representatives and outsiders on a technically advanced level, as well as to identify specific requirements of each work case and to communicate the motivations for their concepts and designs developed for this purpose in a clear and comprehensible form.
Contents of the module	Utopias and Visions
Teaching Methods of the module	Seminar
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	A full-time lecturer is responsible for the module
Further information	None

Description of the unit

Name of unit	Utopias and Visions
Code	
Name of module	Utopias and Visions
Contents of the Unit	The discussion of the multi-various interconnections of architecture and culture will primarily focus on current positions; while at the same time will give reference to relations of important programs and manifestations just as modernism, postmodernism, late modernity, postmodernism and modern modernism. Essentially cultural, ideological, political and social developments are addressed. Special attention is given to overall subjects, for example the language of architecture, ornament, monumentality or efficiency and sustainability.
Teaching Methods	Seminar
Contact hours per week (SWS)	4
Total Workload of the Unit (h)	5cp/ 150 h
Total time of contact hours (h)	60 h
Total time of examination incl. preparation (h)	30 h
Total time of self-study (h)	60 h
Total time of practical training (h)	0 h
Language of the Unit	English
Lecturer	Prof. Dr. Wolfgang Jung
Recommended Reading	- Ulrich Conrads (Hrsg.), Programme und Manifeste zur Architektur des 20. Jahrhunderts, Braunschweig / Wiesbaden, 1975 - Charles Jencks, Karl Kropf (Ed.s), Theories and Manifestoes of contemporary architecture, London 1997 - Ruth Eaton - Die ideale Stadt: von der Antike bis zur Gegenwart, Berlin 2001 (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	

Description of the module

Module title	**Rehabilitate, Reuse, Add-on**
Module number	WPM 8
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	Architektur (M.A.);
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: Second semester
Status of the module	Optional Module
ECTS/ Credit points (cp) / Workload (h)	5 cp / 150 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Written examination in form of a term paper, Processing time: 6 weeks
Learning outcomes and skills	The students acquire detailed knowledge in the thematic field of *Rehabilitate, Reuse, Add-on*. Students are enabled through the practical application of the gained knowledge to develop in the field of the rehabilitation of architecture and city, to evaluate them and to make comprehensive decisions on the grounds of the specific contexts and conditions. Furthermore, the students acquire abilities to exchange problems and solutions with expert representatives and outsiders on a technically advanced level, as well as to identify specific requirements of each work case and to communicate the motivations for their concepts and designs developed for this purpose in a clear and comprehensible form.
Contents of the module	Rehabilitate, Reuse, Add-on
Teaching Methods of the module	Seminar
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	A full-time lecturer is responsible for the module
Further information	

Description of the unit

Name of unit	Rehabilitate, Reuse, Add-on
Code	
Name of module	Rehabilitate, Reuse, Add-on
Contents of the Unit	The students are introduced into the history of renovation, new use and complement of existing buildings and the preservation of monuments. Examples from the history of renovation, new-use and complement and essentially false restoration, bad new-usage and hardly convincing extensions from the past centuries. At the center of this is the study of dealing with the building stock, the "anonymous" as the protected monument from the 20th century. On this basis students have to develop and formulate a concept for refurbishment, new-use and extension for a selected building example of this time period. Learning goal is to develop a draft with appropriate repairs for the selected building.
Teaching Methods	Seminar
Contact hours per week (SWS)	4
Total Workload of the Unit (h)	5 cp / 150 h
Total time of contact hours (h)	60 h
Total time of examination incl. preparation (h)	30 h
Total time of self-study (h)	0 h
Total time of practical training (h)	60 h
Language of the Unit	English
Lecturer	Prof. Dr. Wolfgang Jung
Recommended Reading	Norbert Huse (Hrsg.), Denkmalpflege. Deutsche Texte aus drei Jahrhunderten, München 1996 Norbert Huse, Unbequeme Baudenkmale. Entsorgen? Schützen? Pflegen?, München 1997 Wüstenrot Stiftung (Hrsg.), Monika Markgraf, Simone Oelker, Andreas Schwarting und Norbert Huse, *Denkmalpflege der Moderne. Konzepte für ein junges Architekturerbe,* Stuttgart + Zürich 2011 (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	

Description of the module

Module title	**Urban Development and District Planning**
Module number	WPM 9
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	Architektur (M.A.), Umweltmanagement und Stadtplanung in Ballungsräumen (M.Eng)
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: Second semester
Status of the module	Optional Module
ECTS/ Credit points (cp) / Workload (h)	5 cp / 150 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Written examination in form of a term paper, Processing time: 6 weeks
Learning outcomes and skills	The students acquire detailed knowledge in the thematic field of *Urban Development and District Planning*. Students are enabled through the practical application of the gained knowledge to develop urban and district contexts, to evaluate them and to make comprehensive decisions on the grounds of the specific contexts and conditions. Furthermore, the students acquire abilities to exchange problems and solutions with expert representatives and outsiders on a technically advanced level, as well as to identify specific requirements of each work case and to communicate the motivations for their concepts and designs developed for this purpose in a clear and comprehensible form.
Contents of the module	Urban Development and District Planning
Teaching Methods of the module	Seminar
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	Prof. Dr. Michael Peterek
Further information	None

Description of the unit

Name of unit	Urban Development and District Planning
Code	
Name of module	Urban Development and District Planning
Contents of the Unit	Overview of the theory and practice of the planning processes at the urban and the district level, methods and procedures of urban and district development planning, current projects of an environmentally compatible, energy and traffic-saving urban and settlement planning as well as the related legal planning instruments. Particular attention is also given to open and public space planning in this context.
Teaching Methods	Seminar
Contact hours per week (SWS)	4
Total Workload of the Unit (h)	5 cp / 150 h
Total time of contact hours (h)	60 h
Total time of examination incl. preparation (h)	30 h
Total time of self-study (h)	60 h
Total time of practical training (h)	0 h
Language of the Unit	English
Lecturer	Prof. Dr. Michael Peterek
Recommended Reading	- Burdett, R. and Sudjic, D.,The Endless City, Berlin & London 2008 - Jessen, J. et al, stadtmachen.eu: Urbanity and the Planning Culture in Europe, Stuttgart 2008 - Sieverts, T., Cities without cities: An interpretation of the Zwischenstadt, London 2003 - Gehl, J. and Rogers, R., Cities for People, Washington (DC) 2010 - Carmona M. et al., Public Places – Urban Spaces. The Dimensions of Urban Design, Amsterdam 2010 - LeGates, R.T. (ed), The City Reader, London 2011 (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	

Description of the module

Module title	**Urban Renewal and Redevelopment**
Module number	WPM 10
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	Architektur (M.A.), Umweltmanagement und Stadtplanung in Ballungsräumen (M.Eng)
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: Second semester
Status of the module	Optional Module
ECTS/ Credit points (cp) / Workload (h)	5 cp / 150 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Written examination in form of a term paper, Processing time: 6 weeks
Learning outcomes and skills	The students acquire detailed knowledge in the thematic field *of Urban Renewal and Redevelopment*. Students are enabled through the practical application of the gained knowledge to support and initiate the urban renewal and redevelopment, to evaluate them and to make comprehensive decisions on the grounds of the specific contexts and conditions. Furthermore, the students acquire abilities to exchange problems and solutions with expert representatives and outsiders on a technically advanced level, as well as to identify specific requirements of each work case and to communicate the motivations for their concepts and designs developed for this purpose in a clear and comprehensible form.
Contents of the module	Urban Renewal and Redevelopment
Teaching Methods of the module	Seminar
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	Prof. Dr. Maren Harnack
Further information	None

Description of the unit

Name of unit	Urban Renewal and Redevelopment
Code	
Name of module	Urban Renewal and Redevelopment
Contents of the Unit	Models, concepts, procedures and instruments in the fields of urban renewal, urban redevelopment and urban design; Related legal bases of the general and special cities building and Construction laws; Methods of analysis and development of action plans from the district to the individual project; Overview of the historical development of urban regeneration, urban redevelopment and urban design; Current examples from the English and international context.
Teaching Methods	Seminar
Contact hours per week (SWS)	4
Total Workload of the Unit (h)	5 cp / 150 h
Total time of contact hours (h)	60 h
Total time of examination incl. preparation (h)	30 h
Total time of self-study (h)	60 h
Total time of practical training (h)	0 h
Language of the Unit	English
Lecturer	Prof. Dr. Maren Harnack
Recommended Reading	L. Schenk, *Designing Cities. Basics, Principles, Projects.* Basel T. Bürklin and M. Peterek, *Urban Building Blocks.* Basel Fred Koetter and Colin Rowe: Collage City. Cambridge (Mass.) (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	

Description of the module

Module title	**DigitalAnalog**
Module number	WPM 11
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	Architektur (M.A.)
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: Second semester
Status of the module	Optional Module
ECTS/ Credit points (cp) / Workload (h)	5 cp / 150 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Written examination in form of a term paper, Processing time: 6 weeks
Learning outcomes and skills	The students acquire detailed knowledge in the thematic field of *Digital-Analog*. Students are enabled through the practical application of the gained knowledge to understand visual communications in the field of architecture, to evaluate them and to make comprehensive decisions on the grounds of the specific contexts and conditions. Furthermore, the students acquire abilities to exchange problems and solutions with expert representatives and outsiders on a technically advanced level, as well as to identify specific requirements of each work case and to communicate the motivations for their concepts and designs developed for this purpose in a clear and comprehensible form.
Contents of the module	The name of the unit is identical: “DigitalAnalog”.
Teaching Methods of the module	Seminar
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	A full-time lecturer is responsible for the module
Further information	None

Description of the unit

Name of unit	DigitalAnalog
Code	
Name of module	DigitalAnalog
Contents of the Unit	The students acquire knowledge in the communication of architecture. Thematic priority lies on visual communication (perception theory) as part of the design as well as the presentation of architecture. The focus is on the adequate selection of suitable tools for a task position within the range of two-dimensional and three-dimensional, analog and digital imaging techniques and tools. The selection of these tools helps the students to make the design process visible and keep a design process visually transparent from the initial situation to the ultimately haptic-sensuous qualities of architecture.
Teaching Methods	Seminar
Contact hours per week (SWS)	4
Total Workload of the Unit (h)	5 cp / 150 h
Total time of contact hours (h)	60 h
Total time of examination incl. preparation (h)	30 h
Total time of self-study (h)	0 h
Total time of practical training (h)	60 h
Language of the Unit	English
Lecturer	Prof. Claudia Lüling, Prof. Carsten Rohde, Prof. Anett Zinsmeister
Recommended Reading	Jason S. Johnson and Joshua Vermillion, Digital Design Exercises for Architecture Students Roark T. Congdon, Architectural Model Building: Tools, Techniques, and Materials Jonathan Baldwin and Lucienne Roberts, Visual Communication: From Theory to Practice (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	

Description of the module

Module title	**Experimental Design**
Module number	WPM 12
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	Architektur (M.A.)
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: Second semester
Status of the module	Optional Module
ECTS/ Credit points (cp) / Workload (h)	5 cp / 150 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Written examination in form of a term paper, Processing time: 6 weeks
Learning outcomes and skills	The students acquire detailed knowledge in the thematic field of Experimental Design. Students are enabled through the practical application of the gained knowledge to develop architectural designs in experimental formats, to evaluate them and to make comprehensive decisions on the grounds of the specific contexts and conditions. Furthermore, the students acquire abilities to exchange problems and solutions with expert representatives and outsiders on a technically advanced level, as well as to identify specific requirements of each work case and to communicate the motivations for their concepts and designs developed for this purpose in a clear and comprehensible form.
Contents of the module	Experimental Design
Teaching Methods of the module	Seminar
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	A full-time lecturer is responsible for the module
Further information	None

Description of the unit

Name of unit	Experimental Design
Code	
Name of module	Experimental Design
Contents of the Unit	Design in the context of experimental approaches in space and architecture: The students acquire knowledge how they can solve spatial-architectural questions by the use of alternative approaches instead of classical approaches on the basis of experimental strategies via methodical as well as substantive input to related topics in nature, art and technology.
Teaching Methods	Seminar
Contact hours per week (SWS)	4
Total Workload of the Unit (h)	5 cp/ 150 h
Total time of contact hours (h)	60 h
Total time of examination incl. preparation (h)	30 h
Total time of self-study (h)	0 h
Total time of practical training (h)	60 h
Language of the Unit	English
Lecturer	Prof. Claudia Lüling, Prof. Carsten Rohde, Prof. Anett Zinsmeister
Recommended Reading	Asterios Agkathidis and Markus Hudert, Form Defining Strategies: Experimental Architectural Design (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	

Description of the module

Module title	**Structural Design**
Module number	WPM 14
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	Architektur (M.A.); Master of Engineering in the field of Civil Engineering (M.Eng)/(M.Sc.)
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: Second semester
Status of the module	Optional Module
ECTS/ Credit points (cp) / Workload (h)	5 cp / 150 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Written examination in form of a term paper, Processing time: 6 weeks
Learning outcomes and skills	The students acquire detailed knowledge in the thematic field of *Structural Desig*n. Students are enabled through the practical application of the gained knowledge to develop structural designs in several formats, to evaluate them and to make comprehensive decisions on the grounds of the specific contexts and conditions. Furthermore, the students acquire abilities to exchange problems and solutions with expert representatives and outsiders on a technically advanced level, as well as to identify specific requirements of each work case and to communicate the motivations for their concepts and designs developed for this purpose in a clear and comprehensible form.
Contents of the module	Structural Design
Teaching Methods of the module	Seminar
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	A full-time lecturer is responsible for the module
Further information	None

Description of the unit

Name of unit	Structural Design
Code	
Name of module	Structural Design
Contents of the Unit	Sensitization in the design and constructive handling of load-bearing structures, also current topics, for example from the following areas: Membrane support structures Wide-span structures Structures made of "new" building materials Experimental development of new bearing structures Development of shaped, amorphous and bionic support structures Possibilities and limits of implementation
Teaching Methods	Seminar
Contact hours per week (SWS)	4
Total Workload of the Unit (h)	5cp / 150 h
Total time of contact hours (h)	60 h
Total time of examination incl. preparation (h)	30 h
Total time of self-study (h)	0 h
Total time of practical training (h)	60 h
Language of the Unit	English
Lecturer	Prof. Klaus Fäth, Prof. Dr. Holger Techen
Recommended Reading	Heino Engel, Tragsysteme / Structure Systems, Stuttgart 2009 (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	

Description of the module

Module title	**Material Design**
Module number	WPM 17
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	Architektur (M.A.); Master of Engineering/Master of Science in the field of Civil Engineering
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: Second semester
Status of the module	Optional Module
ECTS/ Credit points (cp) / Workload (h)	5 cp / 150 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Written examination in form of a term paper, Processing time: 6 weeks
Learning outcomes and skills	The students acquire detailed knowledge in the thematic field of *Material Design*. Students are enabled through the practical application of the gained knowledge to develop architectural designs in several formats with new and unknown materials, to evaluate them and to make comprehensive decisions on the grounds of the specific contexts and conditions. Furthermore, the students acquire abilities to exchange problems and solutions with expert representatives and outsiders on a technically advanced level, as well as to identify specific requirements of each work case and to communicate the motivations for their concepts and designs developed for this purpose in a clear and comprehensible form.
Contents of the module	Material Design
Teaching Methods of the module	Seminar
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	A full-time lecturer is responsible for the module
Further information	None

Description of the unit

Name of unit	Material Design
Code	
Name of module	Material Design
Contents of the Unit	Design in the context of new materials and material developments within the construction sector. The students acquire knowledge in experimental architecture and design, with a focus on the development of concepts for the design with new, unknown materials and materials from research and industry for new buildings and building in existing contexts in a sustainable way.
Teaching Methods	Seminar
Contact hours per week (SWS)	4
Total Workload of the Unit (h)	5cp /150 h
Total time of contact hours (h)	60 h
Total time of examination incl. preparation (h)	30 h
Total time of self-study (h)	0 h
Total time of practical training (h)	60 h
Language of the Unit	English
Lecturer	Prof. Claudia Lüling, Prof. Dr. Holger Techen, Prof. Anett Zinsmeister
Recommended Reading	Christiane Sauer, Made of: New Materials, Sourcebook for Architecture and Design (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	

Description of the module

Module title	**Climate Design**
Module number	WPM 18
Module code	
Study program	Advanced Architecture (M.Sc.)
Applicability of the module	Architektur (M.A.)
Duration of the Module	1 semester
Recommended semester in program	Freely selectable, recommended: Second semester
Status of the module	Optional Module
ECTS/ Credit points (cp) / Workload (h)	5 cp / 150 h
Prerequisites of previous knowledge	None
Prerequisites for participation in the module	None
Prerequisites for participation in the module examination	None
Module examination	Written examination in form of a term paper, Processing time: 6 weeks
Learning outcomes and skills	The students acquire detailed knowledge in the thematic field of *Climate Design*. Students are enabled through the practical application of the gained knowledge to develop architectural designs in several formats adequate to climatic contexts, to evaluate them and to make comprehensive decisions on the grounds of the specific contexts and conditions. Furthermore, the students acquire abilities to exchange problems and solutions with expert representatives and outsiders on a technically advanced level, as well as to identify specific requirements of each work case and to communicate the motivations for their concepts and designs developed for this purpose in a clear and comprehensible form.
Contents of the module	Climate Design
Teaching Methods of the module	Seminar
Language of the module	English
Frequency of the module	Once a year
Coordination of the Module	A full-time lecturer is responsible for the module
Further information	None

Description of the unit

Name of unit	Climate Design
Code	
Name of module	Climate Design
Contents of the Unit	The holistic view and combination of building design, building structure, building facade and building technology with the goal of an optimal energy consumption for new buildings in existing contexts in a sustainable way, for example from the following contents: Integration of building design, structure, envelope and technology Innovative ventilation systems, daylight concepts Energetic optimization of existing buildings Refurbishment Sustainable facade constructions Material and material development in the construction sector Energetic optimization and balancing Gray energy - from production to demolition
Teaching Methods	Seminar
Contact hours per week (SWS)	4
Total Workload of the Unit (h)	5cp /150 h
Total time of contact hours (h)	60 h
Total time of examination incl. preparation (h)	30 h
Total time of self-study (h)	0 h
Total time of practical training (h)	60 h
Language of the Unit	English
Lecturer	Prof. Dr. Hans-Jürgen Schmitz
Recommended Reading	Dirk Bohne, Technischer Ausbau von Gebäuden Volger, Laasch, Haustechnik (Additional literature will be announced at the beginning of the seminar.)
Type and form of Assessment of the unit	For more Information, see Module Examination within the Module description
Assessment of unit achievement	Differentiated grading according to the General Regulations for Examination with the degrees Bachelor and Master of the FRA-UAS.
Further Information	