Module Handbook for the Degree Programme (M.Sc.) *Integrated Urban Development and Design* (IUDD)

Module code	Module title	Degree Programme	Faculty
MA.IUDD.P1	Integrated Urban Design	*Integrated Urban Development and Design (IUDD)* (M.Sc.)	Architecture and Urbanism

Module coordinator	Head of Study Programme IUDD, bauhaus.ifex Coordinator	
Participating professorships	Guest lecturers from practice and research; Professorships from Faculty of Architecture and Urbanism and Faculty of Civil and Environmental Engineering	
Type of module	Compulsory Module	
Module duration and cycle	Two semesters Annually in winter semester and the following summer semester Lecture: weekly Seminar: blockwise	
Semester for taking this module	1^{st} semester: Lecture 2^{nd} semester: Seminar	
Number of credit points (ECTS)	6 CP	
Student workload	In-person / online classes	*45 hours*
	Self-study	*90 hours*
	Exam preparation	*45 hours*
Requirements to earn credit points	<u>Lecture</u> (attestation): Submission of short essay on one of the lecture subjects presented by lecturers <u>Seminar</u> (grade): Presentation of a case study which is later submitted as research paper	
Language of instruction	English	
Prerequisites for this module	Attending Lectures, active participation and preparation for QA sessions and discussions, increased interest in good practice cases, own research on presented cases	
Module components	2 credit hours Lectures 2 credit hours Seminar	
Programmes in which this module can be taken	*Integrated Urban Development and Design* (IUDD) (M.Sc.)	

Registration	Registration via the online course catalogue
Additional remarks	
Learning objectives	The module is dedicated to prepare students and provide overarching impulses for their entire studies. The module with its lecture and seminar leads students to get and overview and develop a more specific understanding about integrated and interdisciplinary approaches in urban design and development as well as how new digital design methods and technologies can contribute to research for large complex systems like cities or regions. Based on selected "good practice" examples in the built environment, students develop a knowledge how interdisciplinary approaches are led from concept to implementation. The module serves as a bases to understand the conceptual pillars of the Master's degree programme »Integrated Urban Development and Design« by attaining an academic and application-oriented reflection of the subject.
Content	The module deals with Integrated urban projects and research in a national and international context. <u>Lectures:</u> For the disciplines concerned with urban design the objective of climate adaptation and protection, resource conservation and use of renewable resources and long-term intergenerational perspectives are just some of the topics that have to be negotiated for future cities. This requires a holistic view on the city and at the same time an understanding among the different disciplines concerned with urban design, also in terms of a social equilibrium in urban space. The United Nations Sustainable Development Goals and European Urban Policies and the Leipzig Charta set an important framework where Integrated Urban Design solutions since then have become a main instrument and approach in urban development to guide this process. For this purpose, the lectures in this module are framing different objectives of the Master's degree programme »Integrated Urban Development and Design« with the idea to support the" urban curator" to develop a holistic view on the city and an understanding between the different disciplines. The lectures present creative strategies and selected examples of "good practice". They show how different approaches can be implemented through the lens of different disciplines, including aspects like mobility transition, circular development, energy and sustainable infrastructure systems in the sense of multi-disciplinary planning approaches with a closer look on their implementation and on research and design projects supported through computational tools for urban analysis and design. The lectures provide solutions in terms of Sustainable

	Development Goals, both for the Northern and Southern hemisphere. <u>Seminar:</u> The European Union is heavily investing in the transformation of the urban environment. This recognises the key role cities play for realising, for example, the ambitions of the European Green Deal. Integrated urban strategies will be a focus of the seminar. First a presentation of research results and experience in integrated urban projects funded by the EU, including the theoretical foundation and analytical methods will be presented. Topics such as defining "territorial cohesion" and identifying the urban dimension of EU Cohesion Policy will be presented to exemplify the impact currently happening on the city and state level. Students will undertake their own research on a topic of personal interest related to integrated urban development, research and present projects from their home countries related to specific features of the content described above and compare this to EU strategies. At the end of the seminar students shall be able to navigate EU urban policy, identify the impact of integrated urban strategies and debate on future and creative urban visions.
Teaching and learning methods	<u>Lectures:</u> Lectures in presences or online. Additionally, some lectures are offered as pre-recorded lectures and students prepare QA for online discussions with the lecturer. <u>Seminar:</u> Lectures, block-wise workshops and presentations in class. Online-consultations.
Reading list	A list of literature is announced before or during the course.

Module code	Module title	Degree programme	Faculty
MA.IUDD.P2	Digital Planning *Digital Design Methods*	*Integrated Urban Development and Design* (IUDD) (M.Sc.)	Architecture and Urbanism

Module coordinator	Professor Computer Science in Architecture and Urbanism	
Participating professorships	Professorship Computer Science in Architecture and Urbanism	
Type of module	Compulsory module	
Module duration and cycle	One semester Annually in winter semester Weekly	
Semester for taking this module	1st semester	
Number of credit points (ECTS)	6 CP	
Student workload	In-person / online classes	*36 hours*
	Self-study	*120 hours*
	Exam preparation	*24 hours*
Requirements to earn credit points	3 CP Attestation: Homework/exercises; 3 CP Grade: seminar paper and final presentation	
Language of instruction	English	
Prerequisites for this module		
Module components	4 credit hours: Either one seminar with four hours per week in term or two seminars with two hours per week in term	
Programmes in which this module can be taken	Is offered in IUDD as preparation for the Module "Digital Design Methods – Advanced" in the 2nd semester.	
Registration	Registration via the online course catalogue	
Additional remarks		
Learning objectives	Learning computer-based methods for analysing and processing a design task Ability to think in abstract models and a basic understanding of algorithms Confidence in using planning software	

	Introduction to the application of new technologies (e. g. artificial intelligence in the planning context)
Content	The module deals with design as a problem-solving process. In various formats computer-based methods for analysing/processing and solving design problems are taught. These methods can be divided into two categories: Generation and Evaluation. <u>Generation includes:</u> Parametric modelling Building Information Modeling (BIM) Algorithms for automated generation and optimisation <u>Evaluation includes:</u> Methods for analysing spatial configurations (e. g. visibility, accessibility, daylight) Pre-occupancy evaluation using virtual reality In addition, the basics of scientific work (structure, implementation, evaluation and documentation of studies) are taught.
Teaching and learning methods	The seminars include introductions to the respective topics, problems and algorithms (partly face-to-face, partly online). These contents are deepened in homework assignments by applying them to a concrete example. At the end of the semester, all aspects taught must be combined in a small study or project and presentation. In addition to the written paper, a presentation of the work has to be submitted (by means of slides and/or video).
Reading list	A list of literature is announced before or during the course

Module code	Module title	Degree programme	Faculty
MA.IUDD.P3	Integrated Urban and Landscape Design (IUDD Study Project I)	*Integrated Urban Development and Design* (IUDD) (M.Sc.)	Architecture and Urbanism

Module coordinator	Professor Urban and Regional Design Professor Landscape Architecture and Landscape Planning	
Participating professorships	Professorship Urban and Regional Design Professorship Landscape Architecture and Landscape Planning Professorship Computer Science in Architecture and Urbanism	
Type of module	Compulsory Module	
Module duration and cycle	One semester Annually in winter semester Weekly	
Semester for taking this module	1st semester	
Number of credit points (ECTS)	12 CP	
Student workload	In-person / online classes	*42 hours*
	Self-study	*270 hours*
	Exam preparation	*48 hours*
Requirements to earn credit points	Presentation of a design project based on plans and models	
Language of instruction	English	
Prerequisites for this module	Preliminary, fundamental knowledge of urban design.	
Module components	8 credit hours Design project including thematic inputs/interdisciplinary guests	
Programmes in which this module can be taken	Integrated Urban Development and Design (M.Sc.) The module serves as preparation for the study project of IUDD students in their 2nd semester.	
Registration	Registration via the online course catalogue	

Additional remarks	Registrations from outside the Faculty of Architecture and Urbanism only after prior coordination with those responsible for the module. Module responsibility alternates annually between the professors.
Learning objectives	In this module, students expand their understanding of the complex phenomena and interrelationships of the urban and rural. They uncover spatial, infrastructural, landscape and social contexts in order to ultimately provide independent and reflective answers to specific spatial situations in their designs. They acquire advanced knowledge for qualified urban and landscape-based urban design. They gain expertise in the analysis of urban and rural structures and routines, their development, typologies and morphologies. They learn to develop and the present the concept for their urban and landscape-based urban design project. Students gain an understanding of the aesthetic, cultural, social, ecological, economic and technical dimensions of urban and landscape design. They acquire skills for an integrated, multiscalar and interdisciplinary thinking in urban and landscape design. Teamwork, dialog, criticism and reflection skills are trained and developed.
Content	The module is primarily concerned with how public space is constituted, what design is required for climate-friendly urban and rural development and how existing buildings and structures need to be dealt with sensibly and responsibly. In order to understand the logics of urbanization and how its dynamics interact with natural spatial conditions, we will be dealing with questions like: What are successful socio-ecological transformation processes? What constitutes sustainably to further construction in urbanization processes? What qualities come with the traffic turnaround? What can contribute to the everyday use of urban spaces or how can the forgotten spaces, the back sides of the urban fabric, be reactivated? Topics such as inclusion, liveable living and working environments, biodiversity, blue-green infrastructures, landscapes as integral system, as well as health and psyche will be tackled within the course. The focus is thereby always on how people live together in their relationship to space, time and the environment.
Teaching and learning methods	Input lectures, exercises, project work, excursions, self-study

Reading list	A list of literature is announced before or during the course

Module code	Module title	Degree programme	Faculty
MA.IUDD.P4	Urban Sociology	*Integrated Urban Development and Design* (IUDD) (M.Sc.)	Architecture and Urbanism

Module coordinator	Professor Urban Studies and Social Research	
Participating professorships	Professorship Urban Studies and Social Research	
Type of module	Compulsory Module	
Module duration and cycle	Two semesters Weekly Lecture: winter semester Seminar: summer semester	
Semester for taking this module	1st semester: Lecture 2nd semester: Seminar	
Number of credit points (ECTS)	6 CP	
Student workload	In-person / online classes	*56 hours*
	Self-study	*64 hours*
	Exam preparation	*30 hours*
Requirements to earn credit points	Lecture: Attestation Seminar: Grades are given for presentation handed in as seminar paper in the seminar part of the module. Workload of self-learning during the course requires compulsory reading and writing between the meeting dates and preparation time applied for the seminar paper.	
Language of instruction	English	
Prerequisites for this module		
Module components	2 credit hours: Lecture 2 credit hours: Seminar	
Programmes in which this mode can be taken	*Integrated Urban Development and Design* (M.Sc.)	

	Seminar: Also applicable in other programs for modules that aim to deepen sustainability knowledge or where such knowledge is a prerequisite.
Registration	Registration via the online course catalogue
Additional remarks	Separate description for mandatory seminar part of module: Seminar Urban Sociology
Learning objectives	Lecture The learning objective is orientation towards the model of the European city in the sense of a deeper understanding of the current city from a social science perspective. Development of competence of the ability to reflect as an urban planner and architect through the lens of historical, social and cultural knowledge. In the lectures, this comprises: • Understanding the socio-cultural dimensions of urban planning in different social contexts. • Understanding demand-based planning through an understanding of the dynamics of social change (as relates to youth cultures, ageing, service orientation, trends, influences of globalisation, etc.), • the promotion of acceptance of socially oriented urban planning and participatory processes of urban development. • Acquisition of special urban sociological knowledge in seminar areas such as the city and transnationalisation, the city and global division of labour, and the city and reflective modernisation. • Insights into empirical social research on urban developments. • Basic knowledge of the Europeanisation process and the fundamental development trends in German, European and non-European cities. Seminar The seminar aims to provide knowledge on different approaches to sustainable urban development and the establishment of resilient urban structures (physical, organisational, social). It aims to enable participants to contribute to the implementation of sustainable and/or resilient solutions in urban development. It also seeks to develop analytical skills to assess the quality of implementation of sustainability goals using practical examples. Basic knowledge will be provided for participating in the process evaluation of projects in urban development planning. The course also aims to raise awareness of the social, economic, and environmental consequences of urban planning measures. Students will be capable of understanding and preparing comparatively complex theories and subjects on the basis of specific selected topics and subject-specific content. They will have the capacity to critically reflect on issues and place them in context.
Content	Lecture The lectures provide a comprehensive understanding of urban

	development in Germany, Europe and the global south in an international context through the following contents: • In-depth knowledge of the basic concepts of urban sociology and the social history of the city (segregation; integration; parallel society; stratification; gentrification; identity, etc.). • City life and urban characters; integration theories and neighbourhood planning. • Space and place; social, functional and aesthetic urbanity; "new urbanity"; socio-cultural, symbolic and economic centrality; centrality and recentralisation in cross-cultural comparison; architecture and city in "reflective modernity;" urban theories from the global south, e.g. informality, and much more. • Complex understanding of urban sociology against the backdrop of conflict and integration-theory discourses of empirical social research. • Critical reflection on social processes, spatial constructions and state development. • Comparative presentation of the development of German and European cities in the context of industrialisation, modernity, colonialism and post-colonialism. Seminar The seminar explores concepts, strategies and practices of sustainable urban development and the principles and practice of creating (more) resilient cities. Debates on urban form, transport and housing offer potential for local action, participation and capacity building. The emergence of the post-growth society is both, an overall concept framing roadmap to sustainable and resilient cities, and a challenge to society and architecture, urban design and planning. Globalisation, urban resilience and changing lifestyles are brought together towards a sociology of a sustainable future.
Teaching and learning methods	The module is taught using various methods, while the didactic focus of the initial lecture lays on the acquisition of in-depth knowledge on issues of social development. The Seminar includes readings, self-studies, presentations and discussions.
Reading list	A list of literature is announced before or during the course

Module code	Module title	Degree programme	Faculty
MA.IUDD.P5	IUDD Model Projects	*Integrated Urban Development and Design* (IUDD) (M.Sc.)	Architecture and Urbanism

Module coordinator	bauhaus.ifex Coordinator	
Participating professorships	Member professorships of the bauhaus.ifex	
Type of module	Compulsory Module	
Module duration and cycle	Three semesters Annually in winter semester and the following summer and winter semester Weekly and blockwise	
Semester for taking this module	1^{st}–3^{rd} semester	
Number of credit points (ECTS)	30 CP	
Student workload	In-person / online classes	*60 hours*
	Self-study + Internship	*80 + 640 hours*
	Exam preparation	*120 hours*
Requirements to earn credit points	Attestation: Next to the formal preparations, a portfolio and motivation letter (1st semester) for the internship semester called "Model Project" students are doing an internship of three to five months in the 3^{rd} semester. Grade: In the 3^{rd} semester, course requirements include an interim report and a final report (25–30 p.) and a final presentation which are handed in online. The module closes with the "Model Project Forum", requiring the students' attendance in Weimar or any selected place to present their Model Project. The forum fosters a critical but practice-related discussion among students and model project partners who are attending the event as guest critiques. Grading: report 90%, presentation 10%	
Language of instruction	English	
Prerequisites for this module	Existing professional experience and employability for an internship related to urban practice	
Module components	2 credit hours with Attestation: Preparatory Seminar with regular individual consultations (online); 1st and partly 2rd semester 14 credit hours with Attestation: Practical Project (internship): "Model Project"; 3^{rd} semester	

	4 credit hours with grading: Online Seminar and Conference in presence "International Model Project Forum" 3rd semester
Programmes in which this module can be taken	Practice-related internship with preparatory seminar, portfolio and application coaching, report and public presentation at annual Model Project Forum (conference)
Registration	Registration via the online course catalogue
Additional remarks	This module is the core module of the IUDD study track "Reflective Urban Practice"
Learning objectives	Besides an introduction to the 'Model Projects Integrated Urban Development and Design' students learn how to link their existing professional experience and interests to a broader field of professional activities related to urban planning and design. They present and reflect their professional experience. In a second part, the students are coached to further develop their specific interests and communicate them in their professional portfolio and actively take part in the targeted application for the reflective practice semester. First semester students are also attending the annual Model Project Forum to get first-hand impressions from different experiences of last semester's Model Projects. Main goals of qualification: • Develop in-depth understanding and exchange about professional fields dedicated to Integrated Urban Development and Design in an international context. • Self-positioning and self-understanding of participants' own professional role in the sense of 'Reflective Practice' in the context of urban strategies and interdisciplinary planning approaches. • Qualifying own profile and portfolio development • Individual Experience about 'Good Practice' through adequate professional project-based training and praxis reflection. • Application of study content in professional practice. • Knowledge transfer from practice to academia (through Forum presentation)
Content	The Model Projects introduce course participants to different fields of activity and occupation in urban development and interdisciplinary approaches in applied research, practice and administration. With the diverse professional fields existing in the field of urban development and design participants are prepared to evaluate and reflect their own existing experience for their future application at a Model Project Partner. P5.1: The Model Project Preparatory Course "Reflective Urban Practice" introduces students to different fields of professional activity and occupation in urban development and interdisciplinary approaches in applied research, practice and administration. With

	the diverse professional fields existing in the field of urban development and design, participants are prepared to evaluate and reflect their own existing experience for their future application at a Model Project Partner for the third semester. The Model Project module (27 ECTS) the 3rd semester includes: P5.2: The "Model Project" (21 ECTS) of the module takes place world-wide at a selected "Model Project Partner" (offices, institutions, administration) for the purpose of practical training. The internship arrangement (three to five months) is related to urban design, planning, research and development. The training place is either proposed through the programme or the student, and approved through head of the module. P5.3: The practical training is accompanied through a well-approved Model Project Forum seminar (6 ECTS) in a virtual class-room, including a guided course with specific due dates, individual and group-wise (P2P) online-consultations, life-meetings of the entire group as well as well as video-based presentation-coaching through online-meetings. Finally, as a highlight of the academic training, the students' presentation is held at the public academic event of our Model Project Forum in presence of our international Model Project Partners acting as experts and critiques.
Teaching and learning methods	P5.1: Input lectures, exercises, portfolio coaching, report and presentation coaching. P5.2: Project work in practice (internship). P5.3: Preparation of comprehensive report and public presentation, self-study, P2P group work, presentation critique, and recordings The class requires continuous and active participation and studies of the material provided on the course platform.
Reading list	A list of literature is announced before or during the course

Module code	Module title	Degree programme	Faculty
MA.IUDD.P6	Applied Research Methods and Thesis Development	*Integrated Urban Development and Design* (IUDD) (M.Sc.)	Architecture and Urbanism

Module coordinator	Scientific Staff at the Professorship Computer Science in Architecture and Urbanism	
Participating professorships	Professorship Computer Science in Architecture and Urbanism	
Type of module	Compulsory Module	
Module duration and cycle	Two semesters Annually summer and winter semester Block seminars	
Semester for taking this module	2nd and 3rd semester	
Number of credit points (ECTS)	6 CP	
Student workload	In-person / online classes	*42 hours*
	Self-study	*90 hours*
	Exam preparation	*48 hours*
Requirements to earn credit points	Attestation: - Processing and presenting results of a field study. - Submitting a research abstract and research framework. - Participation in workshops and contributing to exercises	
Language of instruction	English	
Prerequisites for this module	The two parts of the module have to be taken in the following order: P6.1, P6.2	
Module components	2 credit hours P6.1: Applied Research Methods; 2nd semester 2 credit hours P6.2: Thesis Development; 3rd semester	
Programmes in which this module can be taken	*Integrated Urban Development and Design* (M.Sc.)	
Registration	Registration via the online course catalogue	
Additional remarks		
Learning objectives	The seminar teaches fundamental tools to guide research by applying different research methods, evaluating and interpreting	

	them and lead them to a more comprehensive contextualisation like a research paper or final thesis. <u>P6.1. Applied Research Methods</u> In the block seminar students are trained and qualified to derive and define appropriate research questions from an urban problem. Students understand how to develop relevant research questions and to apply quantitative as well as qualitative methods based on a real case study which is surveyed. In a second part of the seminar students develop a comprehensive understanding and knowledge of techniques in scientific working and research methods; based on P6.1. they are able to analyse and interpret data through specific results and findings and more general interpretation and application of data. Students learn to support their research by critical reception of adequate literature and sources with the goal of writing own academic papers and texts and finally also reach to develop a well-written final thesis. <u>P6.2. Thesis Development</u> In this seminar with workshop, students are prepared for a more qualified processes in defining a master's thesis topic. The logic of research is trained and applied in exercises that lead to a draft abstract and proposal for the master thesis. Students are exercised to form out their thesis topic, that meets scientific standards and creates valuable research works for students and teachers alike. Students are guided through the logic of research, the definition of individual research interest and the more objective need to communicate specific knowledge related to a certain subject of interest by writing an adequate thesis or small research proposal.
Content	The module deals with urban planning topics in a national and international context using digital methods. <u>P6.1. Applied Research Methods</u> Students participate in practical training units that address different techniques of surveying as a basis to systemically organise and categorise their findings. Field work in the urban context serves as "living lab" to explore, experience and evaluate different factors of the urban realm and to contextualize quantitative and qualitative research. They are prepared how to operationalise and communicate the results. <u>In the second part of the seminar,</u> students are trained in academic writing and related skills like: • defining a research subject • conducting systematic searches and reading • selection of appropriate databases • refining research findings

	• applying appropriate citation styles • knowledge about empirical urban research in theory and practice • qualitative and quantitative research methods, interpretation of data and basic knowledge about statistics. <u>P6.2. Thesis Development</u> This seminar is held as intensive workshop with lectures, discussions, exercises and group work. Different approaches are introduced so that students are well-prepared to start their master thesis: • How to find an appropriate topic? • How to formulate a good question? • How to select appropriate methods? • How to present the results and answer the initial question?
Teaching and learning methods	Input lectures, exercises, field-work, self-study, P2P group work, presentations, short text writing
Reading list	A list of literature is announced before or during the course

Module code	Module title	Degree programme	Faculty
MA.IUDD.P7	Digital Design Methods – Advanced	*Integrated Urban Development and Design* (IUDD) (M.Sc.)	Architecture and Urbanism

Module coordinator	Professor Computer Science in Architecture and Urbanism	
Participating professorships	Professorship Computer Science in Architecture and Urbanism	
Type of module	Compulsory Module	
Module duration and cycle	One semester Annually in summer semester Weekly	
Semester for taking this module	2nd semester	
Number of credit points (ECTS)	6 CP	
Student workload	In-person / online classes	*36 hours*
	Self-study	*120 hours*
	Exam preparation	*24 hours*
Requirements to earn credit points	3 CP Attestation: Homework/exercises; 3 CP Grade: seminar paper and final presentation	
Language of instruction	English	
Prerequisites for taking this module	Is offered as complementary seminar to IUDD Study Project II – "Digital Urban Design" in the 2nd semester.	
Module components	Either one seminar with 4 credit hours or two seminars with two credit hours each	
Programmes in which this module can be taken	*Integrated Urban Development and Design* (M.Sc.)	
Registration	Registration via the online course catalogue	
Additional remarks		
Learning objectives	Learning computer-based methods for analysing and processing a design task Ability to think in abstract models and a basic understanding of algorithms Confidence in using planning software	

	Introduction to the application of new technologies (e.g. artificial intelligence in the planning context)
Content	The module deals with design as a problem-solving process. In various formats computer-based methods for analysing/ processing and solving design problems are taught. These methods can be divided into two categories: Generation and Evaluation. <u>Generation includes:</u> - Parametric modelling - Building Information Modeling (BIM) - Algorithms for automated generation and optimisation <u>Evaluation includes:</u> - Methods for analysing spatial configurations (e.g. visibility, accessibility, daylight) - Pre-occupancy evaluation using virtual reality In addition, the basics of scientific work (structure, implementation, evaluation and documentation of studies) are taught.
Teaching and learning methods	The seminars include introductions to the respective topics, problems and algorithms (partly face-to-face, partly online). online). These contents are deepened in homework assignments by applying them to a concrete example. At the end of the semester, all aspects taught must be combined in a small study or project and presentation which has to be submitted as integrated but own partial task related to the IUDD Study Project II “Digital Urban Design”. In addition to the written paper, a presentation of the work has to be submitted (by means of slides and/or video).
Reading list	A list of literature is announced before or during the course

Module code	Module title	Degree programme	Faculty
MA.IUDD.P8	Digital Urban Design (IUDD Study Project II)	*Integrated Urban Development and Design* (IUDD) (M.Sc.)	Architecture and Urbanism

Module coordinator	Professor Computer Science in Architecture and Urbanism	
Participating professorships	Professorship Computer Science in Architecture and Urbanism Professorship Urban and Regional Design Professorship Landscape Architecture and Landscape Planning	
Type of module	Compulsory Module	
Module duration and cycle	One Semester Annually in summer semester Weekly	
Semester for taking this module	2nd semester	
Number of credit points (ECTS)	12 CP	
Student workload	In-person / online classes	*42 hours*
	Self-study	*270 hours*
	Exam preparation	*48 hours*
Requirements to earn credit points	Grade: Processing and presentation of a design project with interdisciplinary approaches using digital analyses and parametric simulations, plans and models.	
Language of instruction	English	
Prerequisites for this module	Preliminary or basic knowledge of urban design. Basic knowledge of digital analysis and design methods. Parallel attendance of the module "Digital Design Methods Advanced" (6 CP) Knowledge from the IUDD Study Project I in the first semester on interdisciplinary approaches in urban planning and urban development serves as a basis for the transfer to the digital focus in this Study Project II.	
Module components	8 credit hours Digital Urban Design (IUDD Study Project II)	
Programmes in which this module can be taken	*Integrated Urban Development and Design* (M.Sc.)	

Registration	Registration via the online course catalogue
Additional remarks	For students enrolled in the master's programme IUDD. Other participants only after verification of prerequisites.
Learning objectives	In the digital urban design project, students develop a comprehensive knowledge on factors relevant to integrated design by learning and applying urban analysis tools, methods and techniques. Based on data-driven approaches participants are enabled to apply different iterations for developing urban scenarios targeting on integrated urban development. Trained in analytical competencies students learn to identify relevant factors of urban systems while applying those through computational tools in urban design. This is mainly reached through the following qualifications: Application of computer-based methods to analyse and process a design task or scenario development in the context of different scale levels (neighbourhood, city region). Ability to map urban planning tasks in abstract system models and to work with algorithmic approaches. Use of specialised planning software for specific subtasks. Integration of interdisciplinary and intradisciplinary aspects when working in groups. Reflection of the digital tools used with regard to generally known methods of urban planning as well as the potential for development and innovation. Prior to this module, the knowledge from the module "Integrated Urban and Landscape Design" (Study Project I) (1st semester) serves as base of knowledge and transfer of interdisciplinary urban design to the digital design project.
Content	The module deals with urban planning topics in a national and international context using digital methods. It focuses on planning and design as a problem-solving process. Computer-based methods for analysing/processing and solving design tasks are applied on the basis of design projects related to urban development and design. The focus is always on human settlement forms, taking into account physical-spatial, ecological and social aspects in urban systems. Selected subsystems relating to water, green space, ecology, economy, climate, social space, transport, etc. are analysed in detail and used as a basis for the design process. Collaboration with neighbouring and more distant disciplines is an essential part of the design project, as urban planning is seen as a connecting element between spatial and socio-ecological issues.
Teaching and learning methods	Input lectures, exercises, project work, excursions, self-study
Reading list	A list of literature is announced before or during the course

Module code	Module title	Degree programme	Faculty
MA.IUDD.WM1	Elective Module	*Integrated Urban Development and Design* (IUDD) (M.Sc.)	Architecture and Urbanism
Module coordinator	According to module(s) selected by the student		
Participating professorships	For the elective module, students select two courses of 3 CP each or one course of 6 CP at any Faculty of Bauhaus-Universität Weimar or other Universities		
Type of module	Elective Module		
Module duration and cycle	Depending on the chosen module(s)		
Semester for taking this module	1st and 2nd semester		
Number of credit points (ECTS)	3 CP + 3 CP or 6 CP		
Student workload	In-person / online classes	*[according to selected course]*	
	Self-study	*[according to selected course]*	
	Exam preparation	*[according to selected course]*	
Requirements to earn credit points	Depending on the chosen module(s): one graded course (3 CP) and one course on attestation (3 CP) or one graded course (6 CP)		
Language of instruction	English or German		
Prerequisites for this module	Depending on the chosen module(s)		
Module components	Depending on the chosen module(s)		
Programmes in which this module can be taken	*Integrated Urban Development and Design* (M.Sc.)		
Registration	According to requirements of module(s) selected by the student		
Additional remarks			
Learning objectives	The elective module enables students to select module(s) by their own choice, meeting their personal and professional interests.		

	Selected modules must align with the study goals as referred to in § 5 of the IUDD study regulations
Content	
Teaching and learning methods	0pen: lectures, seminars, exercises or other formats that are credited and graded; One language course (German language course for foreign students, any other language for German students) can be accounted as 3 CP elective
Reading list	According to selected course(s)

Module code	Module title	Degree Programme	Faculty
MA.IUDD.P9	Master Module	*Integrated Urban Development and Design* (IUDD) (M.Sc.)	Architecture and Urbanism

Module coordinator	bauhaus.ifex, head of IUDD examination board	
Participating professorships	Professorships in the degree programme	
Type of module	Compulsory Module	
Module duration and cycle	One Semester Every semester (winter semester and summer semester)	
Semester for taking this module	4th semester	
Number of credits (ECTS)	30 CP	
Student workload	In-person / online classes	*10 hours*
	Self-study	*800 hours*
	Exam preparation	*90 hours*
Requirements to earn credit points	Fulfilment of master thesis requirements according to study and examination regulations and of university regulations for good academic practice.	
Language of instruction	English	
Prerequisites for this module	All other course grades in the master's programme IUDD have to be completed prior to submit the final thesis	
Module components	2 credit hours Attestation: Master's Colloquium, 3 CP 16 credit hours Grade: Master's Thesis (Submitted Thesis Document), 24 CP 2 credit hours Grade: Master's Thesis Defence (Presentation) 3 CP	
Programmes in which this module can be taken	*Integrated Urban Development and Design* (M.Sc.)	
Registration	The Thesis Application Form needs to be submitted prior to thesis writing through the students to apply and then being approved for the Master's Thesis writing phase. The deadlines for submission of the Thesis Application Form are published on the website of the study programme.	
Additional remarks		
Learning objectives	The Master's thesis exhibits the candidate's ability to engage with an issue of the urban realm independently - within 16 weeks and through applying scientific methods.	

<table>
<tr><td>Content</td><td>The Master Module comprises the final examinations of the Master's degree programme Integrated Urban Development and Design (M.Sc.). By means of this examination it is to be ascertained whether the candidate has gained an overview of methods and content taught in the study programme and has the ability to apply, also in an interdisciplinary manner, his/her scientific knowledge to tasks in this field of knowledge. The subject specialisations in accordance with § 4 of the study regulations should be taken into account.

The Bauhaus-Universität Weimar will award the degree Master of Science (M.Sc.) to candidates upon successful completion of the Master's examination.

<u>Master's Colloquium</u>

The Master's colloquium provides the platform for presenting and discussing the Master's thesis/project based on presentations through the thesis candidate. The successful completion of the Master's colloquium is required before the deadline for the completion of the Master's thesis.

<u>Master's Thesis</u>

Candidates are admitted to write their Master's thesis only after submitting an application at the beginning of the appropriate semester which is nominating a subject and supervisors of the thesis. The examination schedule and registration period will be announced by means of a notice six weeks beforehand at the latest.

<u>Master's Thesis Presentation (oral examination)</u>

The defence of the Master's thesis takes place in an oral examination lasting approximately 40 minutes. As a rule, 20 minutes are allocated for a short presentation by the candidate to present the Master's thesis and around 20 minutes for questions to the candidate.</td></tr>
<tr><td>Teaching and learning methods</td><td>Self-study and individual consultations

Colloquium with presentation

Written thesis

Final presentation as thesis defence</td></tr>
<tr><td>Reading list</td><td></td></tr>
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