

Modulhandbuch
Studiengang Master of Science Integrated
Urbanism and Sustainable Design
Prüfungsordnung: 939-2013

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100 In-Depth Modules

Zugeordnete Module:	51200	Sustainable Architecture I
	51210	Urban Policy, Planning and Sustainable Urban Management
	51220	Urban Ecology and Ecosystem Design I
	51230	Methods and Tools of Planning and Design
	51240	Integrated Research and Design Project I
	51250	Integrated Research and Design Project II
	51260	Integrated Research and Design Project III

Modul: 51200 Sustainable Architecture I

2. Modulkürzel:	010600911	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Wintersemester
4. SWS:	4	7. Sprache:	Englisch
8. Modulverantwortlicher:	Univ.-Prof. Jose Luis Moro		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 1. Semester → In-Depth Modules		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	On completion participants will have: Gained a basic knowledge of the contribution building design and construction can render to the general aim of achieving a sustainable environment, as well as the complex interrelations between the diverse measures at hand. Enhanced their theoretical knowledge on available materials, their characteristics and their environmental impact when used as building materials. A knowledge of the most relevant typologies and functional configurations of buildings aimed at enhancing the environmental conditions within and reducing the resources consumed, especially energy consumed for running the building. A knowledge of the most suitable construction types of building envelopes with high insulation values, both opaque and transparent. gained a basic knowledge of the principles of lightweight construction, being a fundamental strategy for significantly lessening the ecological footprint of built structures. Acquired a repertoire of typical detail construction solutions for dealing with the specific problems of highly insulated building envelopes, especially related to avoiding thermal bridges and air leakages. recognized the relations between questions of energy efficiency, sustainable building design and urban design, to analyse basic problems and to work out architectural and urban concepts on their own in dialogue with interdisciplinary project partners. Students learn basic principles of sustainable and energy efficient architecture and urban planning.		
13. Inhalt:	At the core of this module stands the question how the basic component of built environments, the single building, can be designed and constructed in a way to serve the general goal of sustaining the ecological and resource-related conditions for the future of humankind. The building, in this context, needs to be understood as a part of an overall biological system in which it is embedded and to whose flows of material and energy, but also of human mental impulses and emotions, it is supposed to adapt itself. This pertains, on one side, its general impact on the psychology and general living conditions of people dwelling in it, but also of those influenced by its mere presence, either within an urban or rural context, further, the resources required to erect		

it, then, those necessary for running it during the whole timespan of its usage, finally, those required for dismantling or recycling it. Both the overall design of the building as well as its material implementation play a fundamental role in this context and hence will be at the forefront of the issues dealt with in this module. The course provides an overview of best-practice including technology-driven design approaches and "low-tech" alternatives tested in Europe and the global south. This course teaches basic principles of sustainable and energy-efficient building design. Students will study the principles of environmental architecture, including energy conservation, reduction of embodied energy of buildings and recycling, or the possibilities to integrate the use of solar energy and other renewable energy sources in architecture.

14. Literatur:	Fathy, Hassan, 1986: Natural energy and vernacular architecture Gevorikan, Peter 2009: Alternative energy systems in building design Jocher, Loch, Gasser, zur Brügge, Tvrtkovic, Lederer 2009: Raumpilot Mostafavi, Mohsen 2010: Ecological Urbanism Moro, Rottner, Weißbach u.a. 2009: Baukonstruktion - Vom Prinzip zum Detail Solmes, Leslie 2009: Energy efficiency Schlaich, Bergermann, Bögle 2010: High Energy - Structural Art Thompson, D'Arcy 2006 (8. Aufl.): On Growth and Form
15. Lehrveranstaltungen und -formen:	• 512001 Lecture Sustainable Architecture I • 512002 Projects Sustainable Architecture I
16. Abschätzung Arbeitsaufwand:	Time of attendance: approx. 56 Private Study: approx.124 hours
17. Prüfungsnummer/n und -name:	51201 Sustainable Architecture (LBP), Schriftlich oder Mündlich, Gewichtung: 1
18. Grundlage für ... :	
19. Medienform:	
20. Angeboten von:	Entwerfen und Konstruieren

Modul: 51210 Urban Policy, Planning and Sustainable Urban Management

2. Modulkürzel:	011221912	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Wintersemester
4. SWS:	4	7. Sprache:	Englisch
8. Modulverantwortlicher:	Ph.D. Nina Gribat		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 1. Semester → In-Depth Modules		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	On completion participants will have: • developed a sound understanding the different ways in which key global and regional trends in urbanism have been conceptualised in planning and policy-making. • enhanced their theoretical and conceptual knowledge on planning, urban policy and governance. • reflected on ethical concerns of their practice. • familiarized themselves with conceptual and operational tools on different scales of planning (regional, master, strategic, community, development and project). • gained relevant tools to assess planning practices in relation to different thematic issues (environment, housing, international division of production and workforce, urban transformation) • be prepared to develop strategic interventions.		
13. Inhalt:	This module will focus on different theoretical approaches to cities, environment, social issues and to the practice of urban and regional planning itself. The module aims to make students reflect critically on urban policy-making, urban and regional planning and urban management. In highlighting how different theoretical approaches inform planning practices (and vice versa) the module demonstrates that theoretical and practical approaches to planning are closely interlinked. Furthermore, the module draws attention to the dangers of uncritically transferring theories or practices to different urban contexts (e.g. global north to global south, or growing city to shrinking city). Practical constraints of relying on best practice methodologies (and mainstream urban theories) are highlighted.		
14. Literatur:	Hasan, A., S. Patel and D. Satterthwaite (2005): How to Meet the Millennium Development Goals (MDGS) in Urban Areas Herrie, P und Walther, U. (2005): Socially Inclusive Cities: Emerging Concepts and Practice Philipp Misselwitz, Tim Rieniets (2000): City of Collision. Jerusalem and the Principles of Conflict Urbanism		
15. Lehrveranstaltungen und -formen:	• 512101 Lecture Urban Policy, Planning and Sustainable Urban Management I • 512102 Seminar Urban Policy, Planning and Sustainable Urban Management I		

16. Abschätzung Arbeitsaufwand:	Urban Planning I Time of attendance: approx. 28 h Private Study: approx. 62 h Urban Planning II Time of attendance: approx. 28 h Private Study: approx. 62 h
17. Prüfungsnummer/n und -name:	51211 Urban Policy, Planning and Sustainable Urban Management (LBP), Schriftlich oder Mündlich, Gewichtung: 1
18. Grundlage für ... :	
19. Medienform:	
20. Angeboten von:	Internationaler Städtebau

Modul: 51220 Urban Ecology and Ecosystem Design I

2. Modulkürzel:	011000913	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Wintersemester
4. SWS:	4	7. Sprache:	Englisch
8. Modulverantwortlicher:	Univ.-Prof. Antje Stokman		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 1. Semester → In-Depth Modules		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	On completion participants will have: • gained a basic knowledge of different concepts and trends of perceiving, planning and implementing urban landscapes. • critically understood how these concepts vary by multiple perspectives on the environment and different planning scales. • developed the ability to know and apply different design concepts, strategies and methods to design process-based urban landscapes • obtained a thorough understanding of selected landscape technologies related to different urban and environmental challenges		
13. Inhalt:	This module will present the basic principles of urban ecology and ecosystem design theory applied to urban environments. At the core of this module stands the question how we can understand cities as dynamic ecosystems and how we can integrate ecological principles into urban and landscape planning. The module aims to make students reflect critically on how urban landscapes are conceptualized, planned and implemented. The module will give an overview on actual environmental challenges related to the urban environment and explain the effects of infrastructure development on landscape structure and function - drawing on knowledge from the fields of ecology, engineering and landscape architecture. It will introduce different theories that try to re-center landscape planning and design around the goal of designing green infrastructure systems rather than creating beautiful and luxury landscape images. Responding to contemporary urban and infrastructure development challenges, this course brings together a series of innovative concepts and theories to discuss different methods, models and measures of ecological design of combined landscape and infrastructure systems for the 21st century.		
14. Literatur:	Von Seggern, H., Werner, J., Grosse-Bächle, L. 2008: Creating knowledge. Innovation strategies in designing urban landscapes. Jovis Berlin Margolis, L., Alexander, R. 2007: Living Systems. Birkhäuser, Basel.		
15. Lehrveranstaltungen und -formen:	• 512201 Lecture Introduction Urban Ecology and Design • 512202 Seminar Ecosystem Design and Ecological Engineering		
16. Abschätzung Arbeitsaufwand:	Introduction urban ecology and design , Lecture,		

Time of attendance: approx. 28
Private Study: approx. 62 h
Ecosystem Design and ecological engineering, Seminar,
Time of attendance: approx. 28
Private Study: approx. 62 h

17. Prüfungsnummer/n und -name:	51221 Urban Ecology and Ecosystem Design (LBP), Schriftlich oder Mündlich, Gewichtung: 1
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18. Grundlage für ... :

19. Medienform:

20. Angeboten von:	Landschaftsplanung und Ökologie
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Modul: 51230 Methods and Tools of Planning and Design

2. Modulkürzel:	011000921	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Wintersemester
4. SWS:	4	7. Sprache:	Englisch
8. Modulverantwortlicher:	Dr.-Ing. Josefine Fokdal		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 1. Semester → In-Depth Modules		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	On completion participants will have : • learned to analyze the social, built and natural environment and are able to apply these tools to planning and design tasks. • developed the ability of performing the tasks of stake holder analyses, of mapping, visualizing and modifying data as well as managing projects and writing project briefs. • critically understood how to differentiate between various approaches for solving planning and design tasks and they have background knowledge of relevant projects for the respective scales. • obtained a thorough understanding of research ethics with regard to different integrated research and design approaches.		
13. Inhalt:	This module provides the student with the methodological background needed for the Integrated Research and Design Projects. Student get an overview of methods for gathering, analyzing, assessing and evaluating information and of making decisions that go hand-in-hand with the development of a conceptual approach. In the module students will learn how to apply these methods in the development of their own projects.		
14. Literatur:	DeMers, Michael N. 2009: Fundamentals of geographic information systems Davis 1996: GIS- A Visual Approach Dühr, Stefanie 2007: The visual language of spatial planning : exploring cartographic representations for spatial planning in Europe Hillier, J.2007: Stretching beyond the horizon : a multiplanar theory of spatial planning and governance Lange Blaschke 2007: Landschaftsanalyse mit GIS MacGarigal 2002: Fragstats Metrics Malden, Mass et al. 2008: The handbook of geographic information science. Heywood et al. 2006: An introduction to geographical information systems.		
15. Lehrveranstaltungen und -formen:	• 512301 Lecture Methods and Tools • 512302 Seminar Methods and Tools		
16. Abschätzung Arbeitsaufwand:	Workshop I and II Time of attendance: approx. 28		

Private Study: approx. 62 h
Seminar
Time of attendance: approx. 28
Private Study: approx. 62 h

17. Prüfungsnummer/n und -name:	51231 Methods and Tools of Planning and Design (LBP), Schriftlich oder Mündlich, Gewichtung: 1
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18. Grundlage für ... :	
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19. Medienform:	
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20. Angeboten von:	Städtebau-Institut
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Modul: 51240 Integrated Research and Design Project I

2. Modulkürzel:	011000922	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Wintersemester
4. SWS:	4	7. Sprache:	Englisch
8. Modulverantwortlicher:	Univ.-Prof. Antje Stokman		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 1. Semester → In-Depth Modules		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	This course aims at expanding students' understanding of the roles and responsibilities of professionals involved in the process of shaping our cities, buildings and urban environment. It links research and design skills in terms of applying ecological knowledge, up to date technologies and shaping built form to research and design skills regarding collaborative forms of project development and organization. Students are asked to creatively and strategically assemble new alliances and relationships among owners, clients, builders, consultants, NGOs etc. that lay the groundwork for innovative environmental, urban and architectural design and research. This course explores how these new models of working can expand the scope and capabilities of architects, urban planners and engineers to embed the role of design and research in the total process of developing and realizing a project.		
13. Inhalt:	Students will work individually and in small groups on three, interrelated design projects related to a given region and site. In field trips students will meet a variety of stakeholders including local planning authorities and other public sector officials, representatives of the private sector and local residents. Through the field trip and the study of reports and literature, students will familiarize themselves with the specific ecological, socioeconomic and political contexts and analyze the development challenges. This knowledge will be applied in the preparation of a strategic development concept on a regional scale, a local urban development scheme and a specific design proposal on the scale of a local neighbourhood, building, or related to a specific infrastructure intervention. All three concepts will be developed consecutively and are conceptually linked. Students will apply state-of-the-arts planning and development tools and will work individually or in small groups..		
14. Literatur:	Mohsen Mostafavy (ed.) 2010: Urban Ecology, Lars Mueller Publishers Reinhard Goethert and Nabeel Hamdi 1997: Action planning for cities: a guide to community practice, John Wiley Publishers OSA 2010: Human settlements - formulations and (re-)calibrations. Sun Academia		
15. Lehrveranstaltungen und -formen:	• 512401 Integrated Research and Design Project I		
16. Abschätzung Arbeitsaufwand:	Research and design project Time of attendance: approx. 56		

Private Study: approx. 124 h

17. Prüfungsnummer/n und -name:	51241 Research and Design Project I (LBP), Schriftlich oder Mündlich, Gewichtung: 1
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18. Grundlage für ... :

19. Medienform:

20. Angeboten von:	Landschaftsplanung und Ökologie
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Modul: 51250 Integrated Research and Design Project II

2. Modulkürzel:	011221923	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	15 LP	6. Turnus:	Sommersemester
4. SWS:	10	7. Sprache:	Englisch
8. Modulverantwortlicher:	Ph.D. Nina Gribat		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 2. Semester → In-Depth Modules		
11. Empfohlene Voraussetzungen:	Research and design project I		
12. Lernziele:	This course aims at expanding students' understanding of the roles and responsibilities of professionals involved in the process of shaping our cities, buildings and urban environment. It links research and design skills in terms of applying ecological knowledge, up to date technologies and shaping built form to research and design skills in terms of collaborative forms of project development and organization. Students are asked to creatively and strategically assemble new alliances and relationships among owners, clients, builders, fabricators, consultants, NGOs etc. that lay the groundwork for innovative environmental, urban and architectural design and research. This course explores how these new models of working can expand the scope and capabilities of architects, urban planners and engineers to embed the role of design and research in the total process of developing and realizing a project. The "Integrated Research and Design Module" is designed to address this new condition and prepare the next generation of professionals to lead in the development of new modes of research and design practice.		
13. Inhalt:	Students will apply theoretical and technical knowledge to develop proposals for an integrated development strategy for a specific site. Students will learn to utilize their specific individual skills and interests to form a multi-disciplinary design team working with actual clients and a multitude of stakeholders. Together with external partners, students will develop their own design brief and planning guidelines, undertake baseline research on-site and develop an integrated development strategy which may include proposals on an urban and regional scale, proposals for environmental and infrastructural improvement, concepts for neighbourhood upgrading or architectural interventions. An interdisciplinary team of lecturers and external experts will support students during the entire working period.		
14. Literatur:	R. Kipper and M. Fischer. Cairo, GTZ 2009: Cairo's Informal Areas. Between Urban Challenges and Hidden Potentials. Facts. Voices. Visions. Beltran del Rio et al. 2010: Improving Informal Areas in Greater Cairo Read et al.(ed.) 2005: Future City Loeckx et al. (eds) 2004: Urban Dialogues - visions, projects co-productions		

15. Lehrveranstaltungen und -formen:	• 512501 Integrated Research and Design Project
16. Abschätzung Arbeitsaufwand:	Integrated Research and design project, Time of attendance: approx. 84 h Private Study: approx. 368 h
17. Prüfungsnummer/n und -name:	51251 Integrated Research and Design Project II (LBP), Schriftlich oder Mündlich, Gewichtung: 1
18. Grundlage für ... :	
19. Medienform:	
20. Angeboten von:	Internationaler Städtebau

Modul: 51260 Integrated Research and Design Project III

2. Modulkürzel:	011221924	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	15 LP	6. Turnus:	Wintersemester
4. SWS:	10	7. Sprache:	Englisch
8. Modulverantwortlicher:	Ph.D. Nina Gribat		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 3. Semester → In-Depth Modules		
11. Empfohlene Voraussetzungen:	Integrated research and design project II		
12. Lernziele:	This course aims at expanding students' understanding of the roles and responsibilities of professionals involved in the process of shaping our cities, buildings and urban environment. It links research and design skills in terms of applying ecological knowledge, up to date technologies and shaping built form to research and design skills in terms of collaborative forms of project development and organization. Students are asked to creatively and strategically assemble new alliances and relationships among owners, clients, builders, fabricators, consultants, NGOs etc. that lay the groundwork for innovative environmental, urban and architectural design and research. This course explores how these new models of working can expand the scope and capabilities of architects, urban planners and engineers to embed the role of design and research in the total process of developing and realizing a project. The "Integrated Research and Design Module" is designed to address this new condition and prepare the next generation of professionals to lead in the development of new modes of research and design practice.		
13. Inhalt:	Students will apply theoretical and technical knowledge to develop proposals for an integrated development strategy for a specific site. Students will learn to utilize their specific individual skills and interests to form a multi-disciplinary design team working with actual clients and a multitude of stakeholders. Together with external partners, students will develop their own design brief and planning guidelines, undertake baseline research on-site and develop an integrated development strategy which may include proposals on an urban and regional scale, proposals for environmental and infrastructural improvement, concepts for neighbourhood upgrading or architectural interventions. An interdisciplinary team of lecturers and external experts will support students during the entire working period.		
14. Literatur:	R. Kipper and M. Fischer. Cairo, GTZ 2009: Cairo's Informal Areas. Between Urban Challenges and Hidden Potentials. Facts. Voices. Visions. Beltran del Rio et al. 2010: Improving Informal Areas in Greater Cairo Read et al.(ed.) 2005: Future City Loeckx et al. (eds) 2004: Urban Dialogues - visions, projects co-productions		

15. Lehrveranstaltungen und -formen:	• 512601 Integrated Case Study
16. Abschätzung Arbeitsaufwand:	Integrated Case Study, Time of attendance: approx. 84 h Private Study: approx. 368 h
17. Prüfungsnummer/n und -name:	51261 Integrated Research and Design Project III (LBP), Schriftlich oder Mündlich, Gewichtung: 1
18. Grundlage für ... :	
19. Medienform:	
20. Angeboten von:	Internationaler Städtebau

200 Specialization Modules

Zugeordnete Module:	47980	Architekturgeschichte M II
	48290	Stadtökologie und ökosystemares Entwerfen
	50330	Regional and Urban Planning I
	51180	Sustainable Architecture II (Design and Construction)
	51190	Construction Economics M 1
	51290	Urban Policy, Planning and Sustainable Urban Management II
	51300	Urban Ecology and Ecosystem Design II (Geodesign)
	51310	Contemporary Topics of Architecture and Urban Planning
	51320	Contemporary Topics of Infrastructure Planning and Resource Management
	60750	Contemporary Topics of Urbanism

Modul: 47980 Architekturgeschichte M II

2. Modulkürzel:	011100413	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Unregelmäßig
4. SWS:	4	7. Sprache:	Deutsch
8. Modulverantwortlicher:	Univ.-Prof. Dr. phil. Klaus Jan Philipp		
9. Dozenten:	Klaus Philipp Dietlinde Schmitt-Vollmer Christiane Fülcher Simon Paulus Ulrich Knufinke Kerstin Renz Elisabeth Szymczyk-Eggert		
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 2. Semester → Specialization Modules		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	Vertiefung in Architekturvermittlung und Architekturkritik im architekturgeschichtlichen Kontext. Ausgewählte architekturgeschichtliche Themen werden erfasst, erarbeitet und dargestellt. In kritischer Distanz zum jeweiligen Thema sind die Studierenden fähig, die komplexen architekturgeschichtlichen Inhalte theoretisch fundiert zu hinterfragen und in Texten, Ausstellungen, Aktionen und/oder den "Neuen Medien sowohl einem Fach- als auch Laienpublikum zu vermitteln.		
13. Inhalt:	Ausgewählte Probleme und Fragestellungen auf dem Gebiet der Architekturgeschichte, Erarbeitung und Darstellung von Vermittlungsmöglichkeiten (analog und/oder digital).		
14. Literatur:	Die Literaturrecherche ist Teil der Aufgabenstellung und erfolgt durch die Studierenden. u.a.: Klaus Jan Philipp: Das Reclam Buch der Architektur, Ditzingen 2006		
15. Lehrveranstaltungen und -formen:	• 479801 Seminar		
16. Abschätzung Arbeitsaufwand:	Seminar; Architekturgeschichte M II 180 h (56 h Präsenzzeit, 124 h Selbststudium)		
17. Prüfungsnummer/n und -name:	47981 Seminar: Architekturgeschichte M II (LBP), Schriftlich, Gewichtung: 1 lehrveranstaltungsbegleitend, mündlich und schriftlich		
18. Grundlage für ... :			
19. Medienform:			
20. Angeboten von:	Architekturgeschichte		

Modul: 48290 Stadtökologie und ökosystemares Entwerfen

2. Modulkürzel:	011000533	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Unregelmäßig
4. SWS:	4	7. Sprache:	Deutsch
8. Modulverantwortlicher:	Univ.-Prof. Antje Stokman		
9. Dozenten:	Antje Stokman		
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 2. Semester → Specialization Modules		
11. Empfohlene Voraussetzungen:	Kenntnisse der Grundlagen im Bereich Stadt und Landschaft im europäischen Kontext		
12. Lernziele:	Erlangung von Fachwissen, Frage- und Problemwissen, Analysefähigkeit und Systemverständnis über urbane Landschaften, Infrastruktursysteme und ihre Bedeutung für die Entwicklung und Gestaltung urbaner Landschaften, ökologisches Grundlagen- und Prozesswissen, Entwurfswissen, Kenntnis und Verständnis angewandter Technologien sowie Syntheseverständnis. Innovativer Umgang mit den Schnittstellen Stadtentwicklung, Landschaftsarchitektur, Landwirtschaft, Infrastrukturplanung (Verkehr, Abwasser, Gewässer, Abfall). Wissen über interdisziplinäres Arbeiten und Teamerfordernisse.		
13. Inhalt:	Einführung in Theorie und Praxis der Planung und des Entwerfens urbaner Ökosysteme und integrierter Infrastruktursysteme Kenntnisse über Verfahren und Methoden der Landschaftsplanung und Infrastrukturplanung, Einführung in das Entwerfen unter Einbeziehung naturräumlicher, gestalterischer, technischer und sozio-ökonomischer Aspekte, Darstellung der verschiedenen Handlungsperspektiven aus Sicht der Verkehrsplanung, Abfallwirtschaft, Wasserwirtschaft, Landschaftsplanung, Stadtentwicklung etc. Strategien zukunftsfähiger Raumentwicklung und Gestaltung einer grünen Infrastruktur in expandierenden wie in schrumpfenden Räumen - national und international.		
14. Literatur:	Mostafavi, M., Doherty, G. (Hrsg.) 2010: Ecological Urbanism. Lars Müller Publishers, Baden Oswalt, B. 2002: Netzstadt. Interdisziplinäre Methoden zum Umbau urbaner Systeme. Birkhäuser Verlag, Zürich. Margolis, L. et. al. 2007: Living Systems: Innovative Materialien und Technologien für die Landschaftsarchitektur. Birkhäuser Verlag, Zürich Prominski, Martin, Stokman, Antje et.al.: Fluss.Raum.Entwerfen. Planungsstrategien für urbane Fließgewässer. Basel 2012		
15. Lehrveranstaltungen und -formen:	• 482901 Seminar		
16. Abschätzung Arbeitsaufwand:	180 h (56 h Präsenzzeit, 124 h Selbststudium)		
17. Prüfungsnummer/n und -name:	48291 Stadtökologie und ökosystemares Entwerfen (LBP), Schriftlich, Gewichtung: 1		
18. Grundlage für ... :			

19. Medienform:

20. Angeboten von:

Landschaftsplanung und Ökologie

Modul: 50330 Regional and Urban Planning I

2. Modulkürzel:	021100010	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Wintersemester
4. SWS:	4	7. Sprache:	Englisch
8. Modulverantwortlicher:	Univ.-Prof. Dr.-Ing. Jörn Birkmann		
9. Dozenten:	Jörn Birkmann Astrid Ley		
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, → Specialization Modules		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	The students understand the major challenges, objectives, strategies and instruments in spatial planning and urban development in Europe as well as in developing and countries in transition. The students are acquainted with the legal framework of comprehensive and sector planning and know the capabilities and limits of public planning as "positive" and "negative" planning.		
13. Inhalt:	The course Regional Planning I covers the following topics: • International Planning studies • Overview on current planning issues • Basic Terms of Spatial Planning • Strategies in Spatial Planning • Instruments of Spatial Planning • Performance of Plans, Assessing Plans The course Urban Planning I provides an overview on the origin of planned urban development, starting in Greece and the Roman Empire, passing through all important periods up to the 21st century. The second part introduces urbanisation processes in third world countries, planned and unplanned urban conglomerations, including Mega Cities and Global Cities.		
14. Literatur:	Berke, P.R. et al. (2006): Urban Land Use Planning. Urbana/ Chicago: University of Illinois Press Birkmann et al. (2010): Adaptive urban governance: nes challenges for the second generation of urban adaptation studies to climate change In: Sustainability science 5 Hall, P. (2002): Urban and Regional Planning. New York: Routledge		
15. Lehrveranstaltungen und -formen:	• 503302 Lecture Urban Planning I • 503301 Lecture Regional Planning I		
16. Abschätzung Arbeitsaufwand:	Time of attendance: approx. 45 hours Private Study: approx.135 hours		
17. Prüfungsnummer/n und -name:	50331 Regional and Urban Planning I (LBP), Schriftlich, 120 Min., Gewichtung: 1		
18. Grundlage für ... :			
19. Medienform:			
20. Angeboten von:	Raumentwicklungs- und Umweltplanung		

Modul: 51180 Sustainable Architecture II (Design and Construction)

2. Modulkürzel:	010600420	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Wintersemester
4. SWS:	4	7. Sprache:	Deutsch
8. Modulverantwortlicher:	Univ.-Prof. Jose Luis Moro		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 3. Semester → Specialization Modules		
11. Empfohlene Voraussetzungen:	Grundlegende Kenntnisse in Tragwerkslehre, Technischem Zeichnen, Konstruktion, Planung und Gebäudeentwurf		
12. Lernziele:	Die Studierenden haben komplexere funktionale Organisationsstrukturen von Gebäuden sowie daraus sich herleitende etablierte Gebäudetypen in ihrer Logik und ihren Gesetzmäßigkeiten kennengelernt und verstanden. Insbesondere die Wechselwirkung und enge Abhängigkeit zwischen dem Entwerfen und dem Konstruieren ist in diesem Zusammenhang von den Studierenden erfasst worden. Zielkonflikte wurden erkannt und Lösungswege durch überlegte Abwägung und fundierte Entscheidung gefunden.		
13. Inhalt:	Der Schwerpunkt des Studienfachs ist das Gebäude in ganzheitlicher Betrachtung unter Berücksichtigung nicht nur konstruktiver, sondern auch funktionaler und formalästhetischer Gesichtspunkte. Zu den Inhalten zählt nicht nur die Analyse der relevanten Entwurfsfaktoren beim Konzipieren eines Gebäudes, sondern darüber hinaus das Verdeutlichen der Wechselbeziehungen und gegenseitigen Abhängigkeiten zwischen ihnen. Zum Seminarprogramm gehören Gebäudeanalysen, Stegreifübungen, Vorträge und Bauwerksbesichtigungen. Das Fach wird in fakultätsübergreifender Form für Architektur-, Bauingenieur- und Technikpädagogikstudenten gelehrt		
14. Literatur:	• Vorlesungsskripte • Übungsskripte • Literaturliste		
15. Lehrveranstaltungen und -formen:	• 511801 Lecture Sustainable Architecture II (Design and Construction) • 511802 Projects Sustainable Architecture II (Design and Construction)		
16. Abschätzung Arbeitsaufwand:	Präsenzzeit: 42 h Selbststudium / Nacharbeitszeit: 138 h Gesamt: 180 h		
17. Prüfungsnummer/n und -name:	• 51181 Sustainable Architecture II (Design and Construction) (PL), Schriftlich oder Mündlich, Gewichtung: 1 • V Vorleistung (USL-V), Schriftlich oder Mündlich		
18. Grundlage für ... :			
19. Medienform:			

20. Angeboten von: Entwerfen und Konstruieren

Modul: 51190 Construction Economics M 1

2. Modulkürzel:	010300001	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Unregelmäßig
4. SWS:	4	7. Sprache:	Deutsch
8. Modulverantwortlicher:	Univ.-Prof. Antje Stokman		
9. Dozenten:	Christian Deplewski Christian Stoy Christopher Hagmann		
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 2. Semester → Specialization Modules		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	Die Studierenden haben ein allgemeines Verständnis für die Planung, Ausführung und Nutzung von Bauwerken als gestaltende, technische und wirtschaftliche Aufgabe des Architekten erlangt.		
13. Inhalt:	Die Veranstaltung gibt einen allgemeinen Einblick in die verschiedenen bauökonomischen Themenstellungen und deren Wechselwirkungen. Das Spektrum wird anhand von konkreten Fragestellungen behandelt, die anhand von Projekten und Entwurfsaufgaben geübt werden. Die folgenden Schwerpunkte bilden unter anderem das Repertoire: Projektentwicklung und Investitionsrechnung Projektmanagement (Termin- und Ablaufplanung etc.) Nutzungs- und Lebenszykluskostenplanung (Energieplanung etc.) Gebäudeökonomie Immobilienmanagement Bauen für die Industrie		
14. Literatur:	Möller, D.-A. (aktuelle Auflage) Planungs- und Bauökonomie, Band 1: Grundlagen der wirtschaftlichen Bauplanung, Oldenbourg, München. Möller, D.-A., Kalusche, W. (aktuelle Auflage) Planungs- und Bauökonomie, Band 2: Grundlagen der wirtschaftlichen Bauausführung, Oldenbourg, München. Ein veranstaltungsbegleitendes Skript sowie weiterführende Literaturhinweise werden zu Beginn der Veranstaltung verteilt.		
15. Lehrveranstaltungen und -formen:	• 511901 Seminar		
16. Abschätzung Arbeitsaufwand:	180 h (56 h Präsenzzeit, 124 h Selbststudium)		
17. Prüfungsnummer/n und -name:	51191 Construction Economics M 1 (LBP), Schriftlich, Gewichtung: 1		
18. Grundlage für ... :			
19. Medienform:			
20. Angeboten von:	Landschaftsplanung und Ökologie		

Modul: 51290 Urban Policy, Planning and Sustainable Urban Management II

2. Modulkürzel:	011221934	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Sommersemester
4. SWS:	2	7. Sprache:	Englisch
8. Modulverantwortlicher:	Ph.D. Nina Gribat		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 2. Semester → Specialization Modules		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	The aim of the seminar is to approach the broad topic of sustainable urban planning with a holistic view. Issues such as settlement patterns, open space, city climate, energy, water, material flows, life cycle cost, sustainable mobility, project management, integrated planning, quality assurance, are examined and evaluated in relation using the selected pilot projects. Intense discussions of specific topics will be promoted. External speakers and experts are invited to give workshops and presentations in order to achieve the overall goal of the seminar: to study the interactions between different sustainability principles.		
13. Inhalt:	Our ecological footprint currently exceeds the Earth's ability to regenerate by about 30%. Cities can take a key role in the transformation towards a more sustainable development because of immense possibilities of organising energy, waste and transportation systems more efficiently. The energy consumption per person can be reduced drastically. However, the saving of energy and resources is only one aspect among many. Another aspect is the physical and functional density of cities. It can, for instance, improve the social interaction of residents and allow municipalities to provide a large variety of social and cultural activities, which would fail in less densely populated areas simply because of the financing. The question underlying this seminar is how cities and neighborhoods need to be developed that offer residents a high quality of life, while being energy-efficient and environmentally friendly.		
14. Literatur:			
15. Lehrveranstaltungen und -formen:	• 512901 Seminar Urban Policy, Planning and Sustainable Urban Management II		
16. Abschätzung Arbeitsaufwand:	Attendance time: ca. 56 h Self study: ca. 124 h		
17. Prüfungsnummer/n und -name:	51291 Urban Policy, Planning and Sustainable Urban Management II (LBP), Schriftlich oder Mündlich, Gewichtung: 1		
18. Grundlage für ... :			
19. Medienform:			
20. Angeboten von:	Internationaler Städtebau		

Modul: 51300 Urban Ecology and Ecosystem Design II (Geodesign)

2. Modulkürzel:	011000933	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Sommersemester
4. SWS:	4	7. Sprache:	Englisch
8. Modulverantwortlicher:	Dr. Hans-Georg Schwarz-von Raumer		
9. Dozenten:	Hans-Georg Schwarz-von Raumer Antje Stokman		
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 2. Semester → Specialization Modules		
11. Empfohlene Voraussetzungen:	Urban Ecology and Ecosystem Design I		
12. Lernziele:	Passing successfully the course the student will have got • knowledge and skills with regard to useful models and GIS-techniques for sustainable design • a deep understanding of geodesig approaches and the problems related to their implementation • experiences and ideas concerning own work practices and preferred workflows		
13. Inhalt:	Geodesign denotes a methodological field which brings together creativity and knowledge based constructiveness in a model and communication driven design process of meso-scaled planning tasks. Both technical and communicational challenges must be tackled and a lot of them still are unsolved: How to install a direct man-machine feedback loop? What are the restrictions for the designer's degree of freedom in creativity, choice and finality? How to tackle uncertainty and ambiguity of model results? Which limits do exist with respect to tool interfaces and IT-skills expected? Do we need an optimized collaboration between designers/planners and IT-specialists/modellers? In its first part the module provides lectures which draw the basic lines and illustrate solutions of geodesign approaches. The second part consists of hands-on exercises and experiments. Our exercises apply models and broadly use Geographic Information Systems (GIS)..		
14. Literatur:			
15. Lehrveranstaltungen und -formen:	• 513002 Exercise GeoDesign • 513001 Seminar Geodesign		
16. Abschätzung Arbeitsaufwand:	Attendance time: ca. 56 h Self study: ca. 124 h		
17. Prüfungsnummer/n und -name:	51301 Urban Ecology and Ecosystem Design II (Geodesign) (LBP), Schriftlich oder Mündlich, Gewichtung: 1		
18. Grundlage für ... :			
19. Medienform:			
20. Angeboten von:	Landschaftsplanung und Ökologie		

Modul: 51310 Contemporary Topics of Architecture and Urban Planning

2. Modulkürzel:	010300001	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Unregelmäßig
4. SWS:	4	7. Sprache:	Englisch
8. Modulverantwortlicher:	Ph.D. Nina Gribat		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 2. Semester → Specialization Modules		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	The module aims to Contribute to the knowledge about contemporary topics of architecture and urban planning The attendees are expected to integrate their current design expertise with contemporary topics of architecture and urban planning.		
13. Inhalt:	Design Principles Urbanism and Housing Concrtuction and Design Building Economics ,		
14. Literatur:			
15. Lehrveranstaltungen und -formen:	• 513101 Contemporary Topics of Architecture and Urban Planning		
16. Abschätzung Arbeitsaufwand:	180 h (56 h Präsenzzeit, 124 h Selbststudium)		
17. Prüfungsnummer/n und -name:	51311 Contemporary Topics of Architecture and Urban Planning (LBP), Schriftlich oder Mündlich, Gewichtung: 1		
18. Grundlage für ... :			
19. Medienform:			
20. Angeboten von:	Internationaler Städtebau		

Modul: 51320 Contemporary Topics of Infrastructure Planning and Resource Management

2. Modulkürzel:	010300002	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Wintersemester/ Sommersemester
4. SWS:	4	7. Sprache:	Englisch
8. Modulverantwortlicher:	Univ.-Prof. Antje Stokman		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 1. Semester → Specialization Modules		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	The module aims to Contribute to the knowledge about contemporary topics of Infrastructure Planning and Resource Management The attendees are expected to integrate their current expertise with contemporary topics infrastructure planning and resource management.		
13. Inhalt:	General Aspects of infrastructure planning Special aspects of urban water management Methodological Aspects of Infrastructure Planning ,		
14. Literatur:			
15. Lehrveranstaltungen und -formen:	• 513201 Contemporary Topics		
16. Abschätzung Arbeitsaufwand:	180 h (56 h Präsenzzeit, 124 h Selbststudium)		
17. Prüfungsnummer/n und -name:	51321 Contemporary Topics of Infrastructure Planning and Resource Management (LBP), Schriftlich oder Mündlich, Gewichtung: 1		
18. Grundlage für ... :			
19. Medienform:			
20. Angeboten von:	Landschaftsplanung und Ökologie		

Modul: 60750 Contemporary Topics of Urbanism

2. Modulkürzel:	010300001	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	6 LP	6. Turnus:	Wintersemester/ Sommersemester
4. SWS:	4	7. Sprache:	Englisch
8. Modulverantwortlicher:	Univ.-Prof. Dr.-Ing. Astrid Ley		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 2. Semester → Specialization Modules		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	The module aims to contribute to the knowledge about the contemporary discourse about urbanism, both in the Global North and South. The attendees are expected to integrate their current design expertise with contemporary topics urbanism.		
13. Inhalt:	integrated urbanism, eco urbanism, conflict urbanism, HABITAT III proces		
14. Literatur:			
15. Lehrveranstaltungen und -formen:	• 607501 Contemporary Topics of Urbanism		
16. Abschätzung Arbeitsaufwand:			
17. Prüfungsnummer/n und -name:	60751 Contemporary Topics of Urbanism (LBP), Sonstige, Gewichtung: 1		
18. Grundlage für ... :			
19. Medienform:			
20. Angeboten von:	Internationaler Städtebau		

400 Key Qualifications Related to the Subject

Zugeordnete Module: 51270 Research Methods I
 51280 Research Methods II

Modul: 51270 Research Methods I

2. Modulkürzel:	011221941	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	3 LP	6. Turnus:	Sommersemester
4. SWS:	2	7. Sprache:	Englisch
8. Modulverantwortlicher:	Univ.-Prof. Dr.-Ing. Astrid Ley		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 2. Semester → Key Qualifications Related to the Subject		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	Students have gained a broad understanding of relevant theoretical concepts and technical tools in the field of integrated and sustainable design. They are able to categorize planning and design task according to various criteria, such as scale, stakeholder involvement, social and ecological impacts. Students are capable of		
13. Inhalt:	The module is linked and taught in parallel to the Integrated Case Study. Students will acquire theoretical, analytical and technical skills, which will support the design proposals developed in relation to a specific site. Students will study relevant best practice projects presented by external experts and practitioners and learn to interact with regional and local stakeholders.		
14. Literatur:	Feireiss (ed.): Architecture of Change 2: Sustainability and Humanity in the Built Environment		
15. Lehrveranstaltungen und -formen:	• 512701 Research Methods I		
16. Abschätzung Arbeitsaufwand:	Attendance time: ca. 20 h Self study: ca. 70 h		
17. Prüfungsnummer/n und -name:	51272 Research Methods I - Seminar 1 (USL), Schriftlich oder Mündlich, Gewichtung: 1		
18. Grundlage für ... :			
19. Medienform:			
20. Angeboten von:	Internationaler Städtebau		

Modul: 51280 Research Methods II

2. Modulkürzel:	011221942	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	3 LP	6. Turnus:	Wintersemester
4. SWS:	2	7. Sprache:	Englisch
8. Modulverantwortlicher:	Ph.D. Nina Gribat		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013, 3. Semester → Key Qualifications Related to the Subject		
11. Empfohlene Voraussetzungen:			
12. Lernziele:	Students have gained a broad understanding of relevant theoretical concepts and technical tools in the field of integrated and sustainable design. They are able to categorize planning and design task according to various criteria, such as scale, stakeholder involvement, social and ecological impacts. Students are capable of		
13. Inhalt:	The module is linked and taught in parallel to the Integrated Case Study. Students will acquire theoretical, analytical and technical skills, which will support the design proposals developed in relation to a specific site. Students will study relevant best practice projects presented by external experts and practitioners and learn to interact with regional and local stakeholders.		
14. Literatur:			
15. Lehrveranstaltungen und -formen:	• 512801 Research Methods II		
16. Abschätzung Arbeitsaufwand:	Attendance time: ca. 20 h Self study: ca. 70 h		
17. Prüfungsnummer/n und -name:	51281 Research Methods II - Seminar 2 (USL), Schriftlich oder Mündlich, Gewichtung: 1		
18. Grundlage für ... :			
19. Medienform:			
20. Angeboten von:	Internationaler Städtebau		

Modul: 81010 Master's Thesis Integrated Urbanism and Sustainable Design

2. Modulkürzel:	-	5. Moduldauer:	Einsemestrig
3. Leistungspunkte:	30 LP	6. Turnus:	Wintersemester/ Sommersemester
4. SWS:	20	7. Sprache:	Englisch
8. Modulverantwortlicher:	Astrid Ley		
9. Dozenten:			
10. Zuordnung zum Curriculum in diesem Studiengang:	M.Sc. Integrated Urbanism and Sustainable Design, PO 939-2013,		
11. Empfohlene Voraussetzungen:			
12. Lernziele:			
13. Inhalt:			
14. Literatur:			
15. Lehrveranstaltungen und -formen:			
16. Abschätzung Arbeitsaufwand:			
17. Prüfungsnummer/n und -name:			
18. Grundlage für ... :			
19. Medienform:			
20. Angeboten von:	Internationaler Städtebau		