

# Urban Agglomerations

Master of Science (M.Sc.)

Faculty 1:

Architecture · Civil Engineering · Geomatics

**Edition 5<sup>th</sup> December 2018**

## Table of Contents

<b>1. Qualification of the Programme</b>	3
<b>2. Recommended Study Programme</b>	4
<b>3. Module and ECTS Overview</b>	5
<b>4. Modules</b>	
UA 1 Urban Planning and Development	6
UA 2 Urban Culture and Governance	11
UA 3 GIS and Remote Sensing	15
UA 4 Scientific Methods and Academic Skills	18
UA 5 Deutsche Sprache und Kommunikation	21
UA 6 Interdisciplinary Project Work	23
UA 7 Urban Infrastructure	25
UA 8 Urban Ecology and Environment	30
UA 9 International Exchange Course	34
UA 10 Master Thesis	35

## 1. Qualification of the programme

The Master Course "Urban Agglomerations" (M.Sc.) offers an international and interdisciplinary formation in sustainable planning, development, management and operation of cities and urban agglomerations. Graduates achieve the following qualifications:

- a broad intercultural perception of urban problems, experiences and practices as well in developed as in developing countries,
- a knowledge of theories and practice, of instruments, and of physical, functional, and infrastructural concepts for urban and city-regional development,
- a knowledge of theories and practice for planning, design, and management of technical infrastructure in urban agglomerations,
- the capacity and methodologies to collect, to analyse and to present information necessary for decision-making
- a broad understanding of project organisation and project management from a scientific as well as a practical point of view,
- the ability to understand, formulate and critically evaluate central concerns of intercultural aspects of urbanisation, of migration, segregation, globalisation,
- a comprehension of various approaches to public participation in urban processes
- the ability to approach and to solve complex urban problems in interdisciplinary teams, in cooperation with local authorities, planning departments, and city-regional corporations.

The Master Programme has an integrated international component with a compulsory International Exchange Course (30 ECTS) at an international partner university.

The degree qualifies for positions in the following fields: public and private services, urban and regional authorities, development corporations, free-lance consultants, real estate agencies, research institutes, and others operating in planning, development, management and operation of cities urban agglomerations.

The degree qualifies to apply for admission to doctoral studies.

## 2. Recommended study programme

Semester 1 (30 ECTS)	UA 1 <b>Urban Planning and Development</b> 10 ECTS	UA 2 <b>Urban Culture and Governance</b> 10 ECTS	UA 3 <b>GIS and Remote Sensing</b> 5 ECTS	UA 4 <b>Scientific Methods and Academic Skills</b> 5 ECTS	UA 5 <b>Deutsche Sprache und Kommunikation</b> 5 ECTS
Semester 2 (30 ECTS)	UA 6 <b>Interdisciplinary Project Work</b> 10 ECTS	UA 7 <b>Urban Infrastructure</b> 10 ECTS	UA 8 <b>Urban Ecology and Environment</b> 5 ECTS		
Semester 3 (30 ECTS)	UA 9 <b>International Exchange Course</b> 30 ECTS				
Semester 4 (30 ECTS)	UA 10 <b>Master Thesis</b> 30 ECTS				

### 3. Module and ECTS overview

Number	Module Title	ECTS	Duration (in sem.)	Examination of the module	Language
UA 1	<b>Urban Planning and Development</b>	10	1	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)	English
UA 2	<b>Urban Culture and Governance</b>	10	1	Written assignment (8 weeks)	English
UA 3	<b>GIS and Remote Sensing</b>	5	1	Written exam (150 minutes)	English
UA 4	<b>Scientific Methods and Academic Skills</b>	5	2	Written assignment (8 weeks), partial exam (50%) Oral presentation, partial exam (50%)	English
UA 5	<b>Deutsche Sprache und Kommunikation</b>	5	2	Klausur (150 Minuten) Teilprüfung (50%) Mündliche Prüfung Teilprüfung (50%)	Deutsch
UA 6	<b>Interdisciplinary Project Work</b>	10	1	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)	English
UA 7	<b>Urban Infrastructure</b>	10	1	Written assignment (8 weeks)	English
UA 8	<b>Urban Ecology and Environment</b>	5	1	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)	English
UA 9	<b>International Exchange Course</b>	30	1	Depending on the requirements at the partner university	English
UA 10	<b>Master Thesis</b>	30	1	Master Thesis (18 weeks) and colloquium (min. 30, max. 60 minutes)	English

## Module description of Module UA 1

Module title	<b>Urban Planning and Development</b>
Module number	<b>UA 1</b>
Study programme	Urban Agglomerations M.Sc.
Module code	
Units	UA 1.1   UA 1.2   UA 1.3   UA 1.4
Level	Advanced level course
Applicability of the module to other study programmes	Urban Agglomerations
Duration of the module	1 semester
Status of the module	Compulsory module
Recommended semester during the study programme	1
Credit points (Cp) of the module	10 ECTS
Prerequisites for module participation	None
Recommended contents of previous modules	None
Prerequisites for module examination	None
Module examination	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)
Intended learning outcomes / Acquired competences	<p><i>Professional qualifications</i></p> <p>Familiarity with trends, characters and problems of global urbanisation            Awareness of social, cultural, economic as well as geographic diversity in urbanisation and housing development worldwide            Knowledge of theory and practice, of instruments and of physical, functional and infrastructural concepts for urban and city-regional development            Understanding of key problems confronting urban development today and of fundamental approaches of how to develop more ecologically oriented cities            Understanding of the concept of Inclusion in the urban planning process and awareness of Universal Design, its theory and practical application in a city-regional context</p> <p><i>Key qualifications</i></p> <p>Capacity of critical and reflected argumentation            Familiarity with and respect for intercultural diversity            Capacity to structure and develop a given project assignment            Basic competences of data analysis, research and academic writing            Presentation and communication skills</p>
Contents of the module	Urbanization and Housing in a Global Context Urban and City-regional Development Sustainable Cities Inclusive Cities and Universal Design
Teaching methods of the module	Lectures, seminar, written assignments, project work, field trips
Total workload	300 hours
Language of the module	English
Frequency of the module	Once a year
Module coordination	Prof. Dr. Michael Peterek
Further information	

## Unit description of Unit UA 1.1

Name of the unit	<b>UA 1.1 Urbanisation and Housing in a Global Context</b>
Code	
Corresponding module	UA 1 Urban Planning and Development
Lecturer	Prof. Dr. Michael Peterek   M.Sc. Yaman Hebbo   Dr. Susana Restrepo Rico
Contents of the unit	Theories, models, trends, and processes of worldwide urbanization and urban development Characters and typologies of cities and urban agglomerations in different regions and continents Newly emerging developments, processes and typologies of formal and informal settlements and housing provision Case-studies of selected urban agglomerations and megacities world-wide
Teaching methods	Lectures, seminar, readings, discussions
Contact hours per week (SWS)	2 SWS
Total workload of the unit (h)	75 h
Total time of contact hours (h)	30 h
Total time of examination incl. preparation (h)	25 h
Total time of practical training (h)	-----
Total time of self-study (h)	20 h
Language of the unit	English
Recommended reading	Brenner, N. and Keil, R. (eds) (2006) <i>The Global Cities Reader</i> . Routledge, London Brugmann, J. (2009) <i>Welcome to the Urban Revolution. How Cities are Changing the World</i> . Bloomsbury Press, New York et al Burdett, R. and Sudjic, D. (2011) <i>Living in the Endless City</i> . Phaidon, Berlin & London Burdett, R. and Sudjic, D. (2008) <i>The Endless City</i> . Phaidon, Berlin & London Gilbert, A. (ed) (1996) <i>The Mega-city in Latin America</i> . United Nations University Press, Tokyo Jenkins, P. et al (eds) (2007) <i>Planning and Housing in the Rapidly Urbanising World</i> . Routledge, London TRIALOG. A Journal for Planning and Building in the Third World Turner, John F.C. (1976) <i>Housing by People: Towards Autonomy in Building Environments</i> . Marion Boyars Publishing, London UN-Habitat (2003) <i>The Challenge of Slums</i> . Earthscan, London
Type and form of assessment	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

## Unit description of Unit UA 1.2

Name of the unit	<b>UA 1.2 Urban and City-regional Development</b>
Code	
Corresponding module	UA 1 Urban Planning and Development
Lecturer	Prof. Dr. Michael Peterek
Contents of the unit	Demographic, economic, social and cultural trends as driving-forces of urban and city-regional development Models, theories and practice of urban development since the period of industrialization Potentials and strategies of urban renewal and brownfields conversion The making of city-regions, their functions, image and morphologies Contemporary key-projects, best practices and innovative approaches to urban and city-regional development in Germany and Europe
Teaching methods	Lectures, seminar, readings, presentations, excursions
Contact hours per week (SWS)	2 SWS
Total workload of the unit (h)	75 h
Total time of contact hours (h)	30 h
Total time of examination incl. preparation (h)	25 h
Total time of practical training (h)	-----
Total time of self-study (h)	20 h
Language of the unit	English
Recommended reading	Bacon, E. (1976) <i>Design of Cities</i> . Harmondsworth, Middlesex Benevolo, L. (1980) <i>History of the City</i> . MIT Press. [German Edition: (2000) <i>Die Geschichte der Stadt</i> . Campus Verlag, Frankfurt am Main] Chen, X. et al (2013) <i>Introduction to Cities. How Place and Space shape Human Experience</i> . Wiley-Blackwell, Chicester Fainstein, S. and Campbell, S. (ed) (2012) <i>Readings in Planning Theory</i> . Wiley-Blackwell, Chicester Gaines, J. and Jäger, S. (2009) <i>A Manifesto for Sustainable Cities: Think Local, Act Global / Albert Speer &amp; Partner</i> . Prestel, München Hall, P. (2002) <i>Urban and Regional Planning</i> . Routledge, London Jacobs, J. (1961) <i>The Death and Life of Great American Cities</i> . Random House, New York Jessen, J. et al (2008) <i>stadtmachen.eu: Urbanity and the Planning Culture in Europe</i> . Karl Krämer Verlag, Stuttgart Landry, C. (2001) <i>The Creative City – A Toolkit for Urban Innovators</i> . Earthscan, London LeGates, R.T. (ed) (2011) <i>The City Reader</i> . Routledge, London
Type and form of assessment	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	



### Unit description of Unit UA 1.3

Name of the unit	<b>UA 1.3 Sustainable Cities</b>
Code	
Corresponding module	UA 1 Urban Planning and Development
Lecturer	Prof. Jeff Kenworthy PhD
Contents of the unit	The concept of sustainability, its history and its relationship to cities A transport and urban form history of cities Understanding automobile dependence Problems of automobile dependence Energy use in transport and the "peak oil problem" Traditional transport planning critique and new approaches Best practice in public transport and non-motorised modes New urbanism – the search for alternatives to urban sprawl Transit-oriented development The central city, human design and the role of public space Some case studies in more sustainable cities
Teaching methods	Lectures, seminar
Contact hours per week (SWS)	3 SWS
Total workload of the unit (h)	110 h
Total time of contact hours (h)	45 h
Total time of examination incl. preparation (h)	35 h
Total time of practical training (h)	-----
Total time of self-study (h)	30 h
Language of the unit	English
Recommended reading	Beatley, T. (2000), <i>Green Urbanism: Learning from European Cities</i> . Island Press, Washington DC Calthorpe, P. and Fulton, W. (2001) <i>The Regional City: Planning for the End of Sprawl</i> . Island Press, Washington DC Gehl, J. and Rogers, R. (2010) <i>Cities for People</i> . Island Press, Washington, DC Newman, P. and Jennings, I. (2008) <i>Cities as Sustainable Ecosystems: Principles and Practices</i> . Island Press, Washington DC Newman, P. and Kenworthy, J. (1999) <i>Sustainability And Cities: Overcoming Automobile Dependence</i> . Island Press, Washington, DC Schiller, P., Bruun, E. and Kenworthy, J. (2010) <i>An Introduction to Sustainable Transportation: Policy, Planning and Implementation</i> . Earthscan, London Voynovic, I. (ed) (2013) <i>Urban Sustainability. A Global Perspective</i> . Michigan State University Press, East Lansing
Type and form of assessment	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

## Unit description of Unit UA 1.4

Name of the unit	<b>UA 1.4 Inclusive Cities and Universal Design</b>
Code	
Corresponding module	UA 1 Urban Planning and Development
Lecturer	Prof. Dr. M.Sc. Caroline Günther
Contents of the unit	Demographic challenges of the cities in the future Analysis of the meaning of Inclusion and Universal Design Qualities of urban districts and neighbourhoods in terms of inclusion Standards and legal regulations Differences between developed and developing cities Looking at the cities potentials and future perspectives
Teaching methods	Lectures, seminar, excursions
Contact hours per week (SWS)	1 SWS
Total workload of the unit (h)	40 h
Total time of contact hours (h)	15 h
Total time of examination incl. preparation (h)	15 h
Total time of practical training (h)	-----
Total time of self-study (h)	10 h
Language of the unit	English
Recommended reading	A reading list will be communicated at the beginning of the course.
Type and form of assessment	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

## Module description of Module UA 2

Module title	<b>Urban Culture and Governance</b>
Module number	<b>UA 2</b>
Study programme	Urban Agglomerations M.Sc.
Module code	
Units	UA 2.1   UA 2.2   UA 2.3
Level	Advanced level course
Applicability of the module to other study programmes	Urban Agglomerations
Duration of the module	1 semester
Status of the module	Compulsory module
Recommended semester during the study programme	1
Credit points (Cp) of the module	10 ECTS
Prerequisites for module participation	None
Recommended contents of previous modules	None
Prerequisites for module examination	None
Module examination	Written assignment (8 weeks)
Intended learning outcomes / Acquired competences	<p><i>Professional qualifications</i></p> <p>Ability to understand, formulate and critically evaluate the central concerns of social and intercultural aspects of urbanization, urbanity and diversity, identity and place, including the ongoing demographic changes and the effects of a globalizing world</p> <p>Knowledge of different international, national and local models and transdisciplinary approaches to city-regional organization and planning, concepts of governance and administration, legal instruments, financial tools, future challenges</p> <p>Knowledge of problems, potentials, strategies and instruments of land management within the context of urban development</p> <p>Awareness of the role of different stakeholders and public participation in governance and urban land management processes</p> <p><i>Key qualifications</i></p> <p>Ability to cooperate in teams and to develop and express an individual position</p> <p>Communication and presentation skills</p> <p>Academic writing skills</p> <p>Knowledge of research methods and academic standards</p>
Contents of the module	Social and Cultural Challenges of Cities Urban and City-regional Governance Practice and Instruments of Land Management
Teaching methods of the module	Lectures, seminar, readings, discussions, presentations
Total workload	300 hours
Language of the module	English
Frequency of the module	Once a year
Module coordination	Prof. Dr. Kathrin Golda-Pongratz
Further information	

## Unit description of Unit UA 2.1

Name of the unit	<b>UA 2.1 Social and Cultural Challenges of Cities</b>
Code	
Corresponding module	UA 2 Urban Culture and Governance
Lecturer	Prof. Dr. Maren Harnack
Contents of the unit	Theories on cities and urban agglomerations Demography, social structure and urban development Effects of globalisation and migration on urban agglomerations The reciprocal socio-spatial relationship: segregation and marginalisation processes Citizenship, identity, diversity and the role of place in urban settings
Teaching methods	Lectures, seminar, discussions, presentations
Contact hours per week (SWS)	3 SWS
Total workload of the unit (h)	120 h
Total time of contact hours (h)	45 h
Total time of examination incl. preparation (h)	30 h
Total time of practical training (h)	-----
Total time of self-study (h)	45 h
Language of the unit	English
Recommended reading	Brenner, N. and Keil, R. (eds) (2006) <i>The Global Cities Reader</i> . Routledge, London Fainstein, S. and Campbell, S. (ed) (2011) <i>Readings in Urban Theory</i> . Wiley-Blackwell, Chicester Harvey, D. (2009) <i>Social Justice and the City</i> . University of Georgia Press, Athens (Georgia) Lees, L. et al (2010) <i>The Gentrification Reader</i> . Routledge, London. Sassen, S. (2001) <i>The Global City</i> . Princeton University Press, New York et al
Type and form of assessment	Written assignment (8 weeks) with 45 % valence of total module assessment
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

## Unit description of Unit UA 2.2

Name of the unit	<b>UA 2.2 Urban and City-regional Governance</b>
Code	
Corresponding module	UA 2 Urban Culture and Governance
Lecturer	Dipl.-Ing. M.Sc. Kristina Oldenburg
Contents of the unit	<p>Legal, administrative and financial framework of city-regions and urban agglomerations</p> <p>Models of governance of cities and urban agglomerations</p> <p>Actors and stake-holders in the planning process</p> <p>Public-private-partnership and project management on the city-regional scale</p> <p>New actors, NGOs, Community-Based Organisations and public participation</p> <p>Future challenges of regional governance</p>
Teaching methods	Lectures, seminar, readings, discussions, excursions
Contact hours per week (SWS)	2 SWS
Total workload of the unit (h)	90 h
Total time of contact hours (h)	30 h
Total time of examination incl. preparation (h)	25 h
Total time of practical training (h)	-----
Total time of self-study (h)	35 h
Language of the unit	English
Recommended reading	<p>Angel, S., Parent, J., Civco D.L. and A. M. Blei (2010) <i>Atlas of Urban Expansion</i>. Lincoln Institute of Land Policy, Cambridge (MA)</p> <p>Birch, E. (2008) <i>The Urban and Regional Planning Reader</i>. Routledge Urban Readers Series, London</p> <p>Sieverts, T. (2003) <i>Cities without cities: An interpretation of the Zwischenstadt</i>. Spon Press, London.</p> <p>Simmonds, R. and Hack, G. (2000) <i>Global City Regions: Their Emerging Forms</i>. Spon Press, London</p> <p>Soja, Edward W. (2006) <i>Postmetropolis: Critical Studies of Cities and Regions</i> [Reprint.]. Blackwell, Oxford</p> <p>Ruble, B.A., Stren, R., Tulchin, J.S. and Varat, D.H. (eds.) (2001) <i>Urban Governance around the World</i>. Woodrow Wilson International Center for Scholars, Washington DC</p>
Type and form of assessment	Written assignment (8 weeks) with 27,5 % valence of total module assessment
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

## Unit description of Unit UA 2.3

Name of the unit	<b>UA 2.3 Practice and Instruments of Land Management</b>
Code	
Corresponding module	UA 2 Urban Culture and Governance
Lecturer	Prof. Peter Kreisl
Contents of the unit	Legal instruments, hierarchies and procedures of regional and urban planning and land management Land management and land administration processes Land Policy Strategic land management Property rights and social responsibility in an international perspective
Teaching methods	Lectures, seminar
Contact hours per week (SWS)	2 SWS
Total workload of the unit (h)	90 h
Total time of contact hours (h)	30 h
Total time of examination incl. preparation (h)	25 h
Total time of practical training (h)	-----
Total time of self-study (h)	35 h
Language of the unit	English
Recommended reading	Cole, D. H. and Ostrom, E. (eds.) (2012) <i>Property in Land and Other Resources</i> . Lincoln Institute of Land Policy, Cambridge (MA) Deininger, K. (2003) <i>Land Policies for Growth and Poverty Reduction</i> . The World Bank research report. Washington DC George, H. (1879) <i>Progress and Poverty</i> . Robert Schalkenbach Foundation, Reprint 1940, New York Gray, K. and Gray, S. F. (2008) <i>Elements of Land Law</i> , 5 <sup>th</sup> edition. Oxford University Press, Oxford Priemus, H. (ed) (2007) <i>Land Use Planning</i> . Elgar, Cheltenham Williamson, I., Enemark, S., Wallace, J. and Rajabifard, A. (2010) <i>Land Administration for Sustainable Development</i> . Redlands (CA)
Type and form of assessment	Written assignment (8 weeks) with 27,5 % valence of total module assessment
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

### Module description of Module UA 3

Module title	<b>GIS and Remote Sensing</b>
Module number	<b>UA 3</b>
Study programme	Urban Agglomerations M.Sc.
Module code	
Units	UA 3.1   UA 3.2
Level	Advanced level course
Applicability of the module to other study programmes	Urban Agglomerations
Duration of the module	1 semester
Status of the module	Compulsory module
Recommended semester during the study programme	1
Credit points (Cp) of the module	5 ECTS
Prerequisites for module participation	None
Recommended contents of previous modules	None
Prerequisites for module examination	None
Module examination	Written exam (150 minutes)
Intended learning outcomes / Acquired competences	<p><i>Professional qualifications</i></p> <p>Knowledge of theory and practice of Geographical Information Systems (GIS) within the context of urban agglomerations</p> <p>Understanding the key concepts of Remote Sensing, the efficient selection, pre-processing and classification of Remote Sensing data</p> <p>Knowledge of the optimal analysis of image data for purposes of urban and city-regional development</p> <p><i>Key qualifications</i></p> <p>General IT competences</p> <p>Ability to capture, visualize and interpret digital data</p>
Contents of the module	GIS Remote Sensing
Teaching methods of the module	Lectures, exercises
Total workload	150 hours
Language of the module	English
Frequency of the module	Once a year
Module coordination	Prof. Dr. René Thiele
Further information	

### Unit description of Unit UA 3.1

Name of the unit	<b>UA 3.1 GIS</b>
Code	
Corresponding module	UA 3 GIS and Remote Sensing
Lecturer	Prof. Dr. René Thiele
Contents of the unit	Concepts of GIS, combining data from different sources, interaction, applications Converting data to information GIS practical applications for urban agglomerations
Teaching methods	Lectures, exercises
Contact hours per week (SWS)	3 SWS
Total workload of the unit (h)	110 h
Total time of contact hours (h)	45 h
Total time of examination incl. preparation (h)	25 h
Total time of practical training (h)	-----
Total time of self-study (h)	40 h
Language of the unit	English
Recommended reading	A reading list will be communicated at the beginning of the course.
Type and form of assessment	Written exam (150 minutes)
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	



## Unit description of Unit UA 3.2

Name of the unit	<b>UA 3.2 Remote Sensing</b>
Code	
Corresponding module	UA 3 GIS and Remote Sensing
Lecturer	Prof. Dr. René Thiele
Contents of the unit	<p>Introduction to the physical basics of remote sensing: visible and near infrared spectrum, sensors</p> <p>Analysis techniques: radiometric indices and supervised classification methods</p> <p>Lab exercises: overview of the capacity of remote sensing to identify and monitor land surfaces and environmental conditions as well as change detection in urban environments</p>
Teaching methods	Lectures, exercises
Contact hours per week (SWS)	1 SWS
Total workload of the unit (h)	40 h
Total time of contact hours (h)	15 h
Total time of examination incl. preparation (h)	10 h
Total time of practical training (h)	-----
Total time of self-study (h)	15 h
Language of the unit	English
Recommended reading	<p>Campbell, James B. und Wynne, Randolph H. (2011) <i>Introduction to Remote Sensing</i>. The Guilford Press, New York</p> <p>Lillesand, Thomas M., Kiefer, Ralph W. and Chipman, Jonathan W. (2008) <i>Remote Sensing and Image Interpretation</i>, 6<sup>th</sup> Edition. John Wiley and Sons, Hoboken (NJ)</p> <p>Schowengert, R. (2007) <i>Remote Sensing – Models and Methods for Image Processing</i>. Elsevier, Oxford</p>
Type and form of assessment	Written exam (150 minutes)
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

## Module description of Module UA 4

Module title	<b>Scientific Methods and Academic Skills</b>
Module number	<b>UA 4</b>
Study programme	Urban Agglomerations M.Sc.
Module code	
Units	UA 4.1   UA 4.2
Level	Advanced level course
Applicability of the module to other study programmes	Urban Agglomerations
Duration of the module	2 semesters
Status of the module	Compulsory module
Recommended semester during the study programme	1 + 2
Credit points (Cp) of the module	5 ECTS
Prerequisites for module participation	None
Recommended contents of previous modules	None
Prerequisites for module examination	None
Module examination	Written assignment (8 weeks), partial exam (50%) Oral presentation, partial exam (50%)
Intended learning outcomes / Acquired competences	<i>Professional qualifications</i> Profound knowledge about scientific tools and different methods of academic research Competences of academic writing and thesis development Ability to present a self-developed topic in front of a public audience Ability to moderate group meetings and public discussions <i>Key qualifications</i> Substantial know-how of the research, presentation and moderation related computer programmes and digital technologies
Contents of the module	Methods of Scientific Research and Academic Writing Presentation and Moderation Skills
Teaching methods of the module	Lectures, seminar, exercises
Total workload	150 hours
Language of the module	English
Frequency of the module	Once a year
Module coordination	Prof. Dr. Kathrin Golda-Pongratz
Further information	

## Unit description of Unit UA 4.1

Name of the unit	<b>UA 4.1 Methods of Scientific Research and Academic Writing</b>
Code	
Corresponding module	UA 4 Scientific Methods and Academic Skills
Lecturer	Prof. Jeff Kenworthy, PhD   Dr. Susana Restrepo
Contents of the unit	<p>General introduction to scientific research, including research design, research standards, project proposals, empirical research methods, such as surveys, questionnaires, working with data, map-based analytical tools</p> <p>Critical reading and text analysis</p> <p>Key elements of academic essays, projects and theses</p> <p>Scientific writing in style and form</p> <p>Working with databanks and the internet, correct referencing</p> <p>Ethical questions</p> <p>Short academic writing exercises</p>
Teaching methods	Lectures, seminar, exercises
Contact hours per week (SWS)	2 SWS (winter semester)
Total workload of the unit (h)	100 h
Total time of contact hours (h)	30 h
Total time of examination incl. preparation (h)	30 h
Total time of practical training (h)	-----
Total time of self-study (h)	40 h
Language of the unit	English
Recommended reading	<p>Booth, W.C., Colomb, G.G. and Williams, J.M. (2008) <i>The Craft of Research</i>. The University of Chicago Press, Chicago &amp; London</p> <p>Denscombe, M. (2007) <i>The Good Research Guide for Small-Scale Social Research Projects</i>. Open University Press, Maidenhead</p> <p>Eco, U. (1977) <i>Come si fa una tesi di laurea</i> [How to Write a Thesis]. Bompiani, Milano</p>
Type and form of assessment	Written assignment (8 weeks), partial exam (50%)
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

## Unit description of Unit UA 4.2

Name of the unit	<b>UA 4.2 Presentation and Moderation Skills</b>
Code	
Corresponding module	UA 4 Scientific Methods and Academic Skills
Lecturer	Dipl.-Ing. Ulla Schuch
Contents of the unit	Techniques of presentation Techniques of moderation Practical exercises and training in presentation and moderation
Teaching methods	Seminar, exercises, presentations
Contact hours per week (SWS)	1 SWS (summer semester)
Total workload of the unit (h)	50 h
Total time of contact hours (h)	15 h
Total time of examination incl. preparation (h)	15 h
Total time of practical training (h)	-----
Total time of self-study (h)	20 h
Language of the unit	English
Recommended reading	A reading list will be communicated at the beginning of the course.
Type and form of assessment	Oral presentation, partial exam (50%)
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

## Module Description of Module UA 5

Modultitel	<b>Deutsche Sprache und Kommunikation</b>
Modulnummer	<b>UA 5</b>
Studiengang	Urban Agglomerations M.Sc.
Modulcode	
Units	UA 5.1
Niveaustufe / Level	Basic and intermediate level
Verwendbarkeit des Moduls	Urban Agglomerations
Dauer des Moduls	2 Semester
Status	Pflichtmodul
Empfohlenes Semester im Studienverlauf	1 + 2
Credits des Moduls	5 ECTS
Voraussetzungen für die Teilnahme am Modul	Keine
Inhaltlich erforderliche Voraussetzungen	Keine
Voraussetzungen für die Teilnahme an der Modulprüfung	None
Modulprüfung	Klausur (150 Minuten), Teilprüfung (50%) Mündliche Prüfung, Teilprüfung (50%)
Lernergebnis / Kompetenzen	<i>Fachkompetenzen</i> Befähigung in deutscher Sprache im beruflichen Kontext kommunizieren, lesen und schreiben zu können <i>Überfachliche Kompetenzen</i> Besondere Kompetenzen in verbaler Kommunikation und freiem Sprechen Präsentationsfähigkeiten
Inhalte des Moduls	Deutsche Sprache und Kommunikation
Lehrformen des Moduls	Seminar, Übungen, Präsentationen
Arbeitsaufwand (h) / Gesamtworkload des Moduls	150 Stunden
Sprache	Deutsch
Häufigkeit des Angebots	Jährlich
Modulkoordination	Prof. Dr. Michael Peterek
Hinweise	Deutsche Muttersprachler und Studierende mit bereits umfassenden Deutschkenntnissen können das Modul "Deutsche Sprache und Kommunikation" durch ein anderes Sprache- und Kommunikationsmodul ersetzen. Dazu ist die Zustimmung des Prüfungsausschusses einzuholen.

## Unit description of Unit UA 5.1

Name der Unit	<b>UA 5.1 Deutsche Sprache und Kommunikation</b>
Code	
Name des zugehörigen Moduls	UA 5 Deutsche Sprache und Kommunikation
Lehrende/r	Sonja Altmüller (Fachsprachenzentrum)
Inhalt der Unit	Kommunikation in deutscher Sprache im Alltag und im beruflichen Kontext Schreiben auf Deutsch Lesen von deutschen Texten und berufsbezogenen Dokumenten
Lehrform	Seminar, Übungen, Präsentationen
SWS der Unit	2 SWS über 2 Semester
Arbeitsaufwand (h) / Workload	150 Stunden
Anteil der Präsenzzeit	60 Stunden
Anteil Prüfungszeit inkl. Prüfungsvorbereitung	30 Stunden
Anteil Praxiszeit	-----
Anteil Selbststudium	60 Stunden
Sprache der Unit	Deutsch
Basis-Literatur	Die zu verwendenden Lehrbücher werden zu Beginn der Lehrveranstaltung bekannt gegeben.
Art und Form des Leistungsnachweises	Klausur (150 Minuten), Teilprüfung (50%) Mündliche Prüfung, Teilprüfung (50%)
Bewertung des Leistungsnachweises	Differenziert (1,0 bis 4,0)
Hinweise	

## Module description of Module UA 6

Module title	<b>Interdisciplinary Project Work</b>
Module number	<b>UA 6</b>
Study programme	Urban Agglomerations M.Sc.
Module code	
Units	UA 6.1
Level	Advanced level course
Applicability of the module to other study programmes	Urban Agglomerations
Duration of the module	1 semester
Status of the module	Compulsory module
Recommended semester during the study programme	2
Credit points (Cp) of the module	10 ECTS
Prerequisites for module participation	None
Recommended contents of previous modules	None
Prerequisites for module examination	None
Module examination	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)
Intended learning outcomes / Acquired competences	<p><i>Professional qualifications</i></p> <p>Ability to carry out scientific work and research on a given professional topic, following a sound methodology and with respect to the different technical, social and cultural dimensions of city-regions and urban agglomerations</p> <p>Competence to work individually as well as within interdisciplinary and intercultural teams and projects, to organize individual and group project work, and to finalize the results in a scientific report and project documentation</p> <p><i>Key qualifications</i></p> <p>Capacity to structure and develop a given assignment</p> <p>Technical report writing skills</p> <p>Group moderation and mediation capacities</p> <p>Competences in intercultural communication</p> <p>Leadership competences</p> <p>Project management skills</p> <p>Presentation skills</p>
Contents of the module	Interdisciplinary Project Work
Teaching methods of the module	Seminar, project work, presentations
Total workload	300 hours
Language of the module	English
Frequency of the module	Once a year
Module coordination	Prof. Dr. Kathrin Golda-Pongratz
Further information	

## Unit description of Unit UA 6.1

Name of the unit	<b>UA 6.1 Interdisciplinary Project Work</b>
Code	
Corresponding module	UA 6 Interdisciplinary Project Work
Lecturer	Prof. Jeff Kenworthy PhD.   Prof. Dr. Michael Peterek
Contents of the unit	<p>Systematic project work, with an either more theoretical/conceptual weight or more empirical, practical orientation, partly done in interdisciplinary groups, on selected issues out of the different fields and scales (from the neighbourhood to the region) of urban agglomerations</p> <p>Context analysis, formulation of project objectives and intended methodologies, collection, evaluation and synthesis of information, finalising of concepts, conclusions and recommendations, scientific report and public presentation of the project</p>
Teaching methods	Seminar, project work, intermediate and final presentations
Contact hours per week (SWS)	4 SWS
Total workload of the unit (h)	300 h
Total time of contact hours (h)	60 h
Total time of examination incl. preparation (h)	180 h
Total time of practical training (h)	-----
Total time of self-study (h)	60 h
Language of the unit	English
Recommended reading	Depending on the specific project, recommended literature will be communicated at the beginning of the course.
Type and form of assessment	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	Definition of the specific topic depending on the interests of the students and student groups and the particular teaching and research activities of the involved professors of „Urban Agglomerations“



## Module description of Module UA 7

Module title	<b>Urban Infrastructure</b>
Module number	<b>UA 7</b>
Study programme	Urban Agglomerations M.Sc.
Module code	
Units	UA 7.1   UA 7.2   UA 7.3   UA 7.4
Level	Advanced level course
Applicability of the module to other study programmes	Urban Agglomerations
Duration of the module	1 semester
Status of the module	Compulsory module
Recommended semester during the study programme	2
Credit points (Cp) of the module	10 ECTS
Prerequisites for module participation	None
Recommended contents of previous modules	None
Prerequisites for module examination	None
Module examination	Written assignment (8 weeks)
Intended learning outcomes / Acquired competences	<p><i>Professional qualifications</i></p> <p>Knowledge of theories and practice of technical infrastructure in water supply and sewage systems, with a particular focus on management, operation and finance possibilities</p> <p>Knowledge of theories and practice of technical infrastructure in waste management within the context of city-regions and urban agglomerations</p> <p>Knowledge of scientific methods and practical applications for planning, design and services of transportations systems for the flowing and the parking traffic, public transport, bicycle and pedestrian traffic in city-regions</p> <p><i>Key qualifications</i></p> <p>Competences of academic writing</p> <p>Presentation skills</p> <p>Teamwork competences</p>
Contents of the module	<p>Water Management</p> <p>Wastewater Management</p> <p>Waste Management</p> <p>Traffic Management</p>
Teaching methods of the module	Lectures, seminar
Total workload	300 hours
Language of the module	English
Frequency of the module	Once a year
Module coordination	Prof. Dr. Antje Welker
Further information	

## Unit description of Unit UA 7.1

Name of the unit	<b>UA 7.1 Water Management</b>
Code	
Corresponding module	UA 7 Urban Infrastructure
Lecturer	Prof. Dr. Ulrich Roth
Contents of the unit	Water demand and potentials to reduce demand Water sources, quality and treatment Water distribution, net types, controlling and maintaining of pipe network Health and environmental impact aspects of water pollution
Teaching methods	Lectures, seminar
Contact hours per week (SWS)	2 SWS
Total workload of the unit (h)	75 h
Total time of contact hours (h)	30 h
Total time of examination incl. preparation (h)	20 h
Total time of practical training (h)	-----
Total time of self-study (h)	25 h
Language of the unit	English
Recommended reading	A reading list will be communicated at the beginning of the course.
Type and form of assessment	Written assignment (8 weeks) with 25 % valence of total module assessment
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

## Unit description of Unit UA 7.2

Name of the unit	<b>UA 7.2 Wastewater Management</b>
Code	
Corresponding module	UA 7 Urban Infrastructure
Lecturer	Prof. Dr. Christian Hähnlein
Contents of the unit	<p>Components of sewage, sewerage systems, stormwater management</p> <p>Quantity of sewage and requirements of wastewater treatment, mechanical and biological treatment, sludge treatment, reuse of sewage and sludge</p> <p>Health and environmental impact aspects of wastewater pollution from an engineering point of view</p> <p>Stormwater treatment and infiltration, rainwater harvesting methods</p> <p>International examples of wastewater and stormwater projects</p>
Teaching methods	Lectures, seminar
Contact hours per week (SWS)	2 SWS
Total workload of the unit (h)	75 h
Total time of contact hours (h)	30 h
Total time of examination incl. preparation (h)	20 h
Total time of practical training (h)	-----
Total time of self-study (h)	25 h
Language of the unit	English
Recommended reading	<p>Butler, D. and Davies, J. (2010) <i>Urban Drainage</i>, 3<sup>rd</sup> Edition. Spon Press, London</p> <p>Water Environment Federation (2012) <i>Wastewater Treatment Plant Design Handbook</i>. Water Environment Federation, Alexandria (USA)</p> <p>Aarne Vesilind, P. (2003) <i>Wastewater Treatment Plant Design</i>. IWA Publishing</p>
Type and form of assessment	Written assignment (8 weeks) with 25 % valence of total module assessment
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

### Unit description of Unit UA 7.3

Name of the unit	<b>UA 7.3 Waste Management</b>
Code	
Corresponding module	UA 7 Urban Infrastructure
Lecturer	Prof. Dr. Antje Welker
Contents of the unit	Type and quantities of waste Waste prevention, collection systems, recycling techniques Biological and thermal treatment, landfills
Teaching methods	Lectures, seminar
Contact hours per week (SWS)	2 SWS
Total workload of the unit (h)	75 h
Total time of contact hours (h)	30 h
Total time of examination incl. preparation (h)	20 h
Total time of practical training (h)	-----
Total time of self-study (h)	25 h
Language of the unit	English
Recommended reading	Hoornweg, D. and Bhada-Tata, P. (2012) <i>What a Waste: a Global Review of Solid Waste Management</i> , Urban Development Series, Knowledge Papers No. 15. The World Bank, Washington, D.C. [Online resource: <a href="http://documents.worldbank.org/curated/en/2012/03/16537275/waste-global-review-solid-waste-management">http://documents.worldbank.org/curated/en/2012/03/16537275/waste-global-review-solid-waste-management</a> ] Chandrappa, R. and Busan Das, D. (2012) <i>Solid Waste Management: Principles and Practice</i> . Springer Verlag, Berlin
Type and form of assessment	Written assignment (8 weeks) with 25 % valence of total module assessment
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

## Unit description of Unit UA 7.4

Name of the unit	<b>UA 7.4 Traffic Management</b>
Code	
Corresponding module	UA 7 Urban Infrastructure
Lecturer	M. Sc. Dominic Hoffman   M. Eng. Dennis Knese
Contents of the unit	Traffic management systems Efficient public transport in city-regions by bus, tram, underground, railway Bicycle and pedestrian traffic Street capacities, quality of life and traffic-reducing concepts New communication technologies and traffic guidance systems Parking management, road pricing, general pricing strategies Best practices and case-studies of transport projects and policies
Teaching methods	Lectures, seminar
Contact hours per week (SWS)	2 SWS
Total workload of the unit (h)	75 h
Total time of contact hours (h)	30 h
Total time of examination incl. preparation (h)	20 h
Total time of practical training (h)	-----
Total time of self-study (h)	25 h
Language of the unit	English
Recommended reading	Iles, R. (2005) <i>Public Transport in Developing Countries</i> . Elsevier, Amsterdam
Type and form of assessment	Written assignment (8 weeks) with 25 % valence of total module assessment
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

## Module description of Module UA 8

Module title	<b>Urban Ecology and Environment</b>
Module number	<b>UA 8</b>
Study programme	Urban Agglomerations M.Sc.
Module code	
Units	UA 8.1   UA 8. 2   UA 8.3
Level	Advanced level course
Applicability of the module to other study programmes	Urban Agglomerations
Duration of the module	1 semester
Status of the module	Compulsory module
Recommended semester during the study programme	2
Credit points (Cp) of the module	5 ECTS
Prerequisites for module participation	None
Recommended contents of previous modules	None
Prerequisites for module examination	None
Module examination	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)
Intended learning outcomes / Acquired competences	<p><i>Professional qualifications</i></p> <p>Knowledge of the technical, functional, ecological and aesthetic basics of landscape and environmental development and greening in urban agglomerations</p> <p>Knowledge of theories and practice of energy supply and energy efficiency within cities</p> <p><i>Key qualifications</i></p> <p>Capacity to structure and develop a given project assignment</p> <p>Competences of academic writing</p> <p>Ability to organize and moderate teamwork</p> <p>Presentation and communication competences</p>
Contents of the module	<p>Urban and Regional Open Spaces</p> <p>Urban Climate and Environmental Management</p> <p>Energy Efficiency and Supply for Cities</p>
Teaching methods of the module	Lectures, seminar, project work, field trips
Total workload	150 hours
Language of the module	English
Frequency of the module	Once a year
Module coordination	Dipl.-Ing. Ulla Schuch
Further information	

## Unit description of Unit UA 8.1

Name of the unit	<b>UA 8.1 Urban and Regional Open Spaces</b>
Code	
Corresponding module	UA 8 Urban Ecology and Environment
Lecturer	Dipl.-Ing. Ulla Schuch
Contents of the unit	<p>Elements, functions and network systems of urban and city-regional landscapes</p> <p>Technical knowledge of the elements contributing to the urban and regional ecology (plants, animal, water, climate etc.)</p> <p>Examples and best-practices of urban and city-regional landscape and open spaces development</p>
Teaching methods	Seminar, presentations, excursions
Contact hours per week (SWS)	2 SWS
Total workload of the unit (h)	75 h
Total time of contact hours (h)	30 h
Total time of examination incl. preparation (h)	25 h
Total time of practical training (h)	-----
Total time of self-study (h)	20 h
Language of the unit	English
Recommended reading	<p>Tate, A. (2001) <i>Great City Parks</i>. Spon Press, London</p> <p>Turner, T. (2007) <i>Landscape Planning and Environmental Impact Design</i>. Routledge, London</p> <p>Waldheim, C. (ed) (2006) <i>The Landscape Urbanism Reader</i>. Princeton Architectural Press, New York</p> <p>Woolley, H. (2006) <i>Urban Open Spaces</i>. Spon Press, London</p>
Type and form of assessment	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

## Unit description of Unit UA 8.2

Name of the unit	<b>UA 8.2 Urban Climate and Environmental Management</b>
Code	
Corresponding module	UA 8 Urban Ecology and Environment
Lecturer	Dipl.-Ing. Ulla Schuch   Prof. Jeff Kenworthy PhD.
Contents of the unit	Knowledge-based methods of environmental monitoring Potentials of renewable energies in urban and regional development Green cities and green design
Teaching methods	Seminar
Contact hours per week (SWS)	1 SWS
Total workload of the unit (h)	37,5 h
Total time of contact hours (h)	15 h
Total time of examination incl. preparation (h)	10 h
Total time of practical training (h)	-----
Total time of self-study (h)	12,5 h
Language of the unit	English
Recommended reading	Berg, J. (ed) (2007) <i>Environmental Planning</i> . Elgar, Cheltenham Beatley, T. (2000), <i>Green Urbanism: Learning from European Cities</i> . Island Press, Washington DC Tang, Z. (ed.) (2013) <i>Eco-City and Green Community: The Evolution of Planning Theory and Practice</i> . Nova Science Publishers, Hauppauge (NY)
Type and form of assessment	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	



### Unit description of Unit UA 8.3

Name of the unit	<b>UA 8.3 Energy Efficiency and Supply for Cities</b>
Code	
Corresponding module	UA 8 Urban Ecology and Environment
Lecturer	Prof. Dr. Martina Klärle
Contents of the unit	Fossil and renewable energies Risks and challenges of climate change Energy demand and energy provision in cities Energy-reducing potentials and concepts for more energy efficient cities
Teaching methods	Lecture, seminar
Contact hours per week (SWS)	1 SWS
Total workload of the unit (h)	37,5 h
Total time of contact hours (h)	15 h
Total time of examination incl. preparation (h)	10 h
Total time of practical training (h)	-----
Total time of self-study (h)	12,5 h
Language of the unit	English
Recommended reading	Droege, P. (2008) <i>Urban Energy Transition. From Fossil Fuels to Renewable Power</i> . Elsevier, Amsterdam
Type and form of assessment	Project work (12 weeks) and colloquium (min. 20, max. 30 minutes)
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	

## Module description of Module UA 9

Module title	<b>International Exchange Course</b>
Module number	<b>UA 9</b>
Study programme	Urban Agglomerations M.Sc.
Module code	
Units	Depending on the courses offered at the chosen international partner university
Level	Advanced level course
Applicability of the module to other study programmes	Urban Agglomerations
Duration of the module	1
Status of the module	Compulsory module
Recommended semester during the study programme	3
Credit points (Cp) of the module	30 ECTS
Prerequisites for module participation	None
Recommended contents of previous modules	None
Prerequisites for module examination	Depending on the requirements at the partner university
Module examination	Depending on the examination requirements at the partner university
Intended learning outcomes / Acquired competences	<p><i>Professional qualifications</i></p> <p>Deepened knowledge in selected matters and specialized fields of urban agglomerations – such as social-cultural aspects, public participation, project management, sustainable urban and regional development, infrastructure provision, planning methods and others – depending on the selected master programme at one of the international partner universities</p> <p><i>Key qualifications</i></p> <p>Competences of intercultural reflection and sensibility</p> <p>Awareness of diversities and/or similarities of the global development phenomena by exposure to an international socio-cultural and academic environment</p> <p>Profound foreign and professional language abilities</p> <p>Intercultural flexibility and knowledge about international network-building</p>
Contents of the module	Studies at a postgraduate level with contents referring to urban agglomerations, depending on the specific lectures, seminars or projects offered at the chosen partner university
Teaching methods of the module	Depending on the courses offered at the partner university
Total workload	900 hours
Language of the module	English or other, depending on the language of the programme at the partner university
Frequency of the module	Each semester
Module coordination	Dipl.-Ing. Caroline Günther, M.Sc.
Further information	The international Exchange Course and the relative exams have to be given at one of the international partner universities of "Urban Agglomerations". For further information see the relative list of partner universities and their specific course options.

## Module description of Module UA 10

Module title	<b>Master Thesis</b>
Module number	<b>UA 10</b>
Study programme	Urban Agglomerations M.Sc.
Module code	
Units	UA 10.1
Level	Advanced level course
Applicability of the module to other study programmes	Urban Agglomerations
Duration of the module	1 semester
Status of the module	Compulsory module
Recommended semester during the study programme	4
Credit points (Cp) of the module	30 ECTS
Prerequisites for module participation	Passed modules UA 1   UA 2   UA 3   UA 4   UA 5   UA 6   UA 7   UA 8   Written Report on International Exchange Course
Recommended contents of previous modules	UA 1   UA 2   UA 3   UA 4   UA 5   UA 6   UA 7   UA 8   UA 9
Prerequisites for module examination	UA 1   UA 2   UA 3   UA 4   UA 5   UA 6   UA 7   UA 8   UA 9
Module examination	Master Thesis (18 weeks) and colloquium (min. 30, max. 60 minutes)
Intended learning outcomes / Acquired competences	<i>Professional qualifications</i> Competence to carry out individual and independent scientific work on a specific topic, applying scientific methods and developing solutions with respect to the different technical, social and cultural dimensions of cities and urban agglomerations. <i>Key qualifications</i> Ability to develop systematic, substantial and original academic research work Capacity to synthesize information, build new knowledge and draw conclusions to attain a higher level understanding Capacity to design a research proposal and to use a set of different research tools Academic writing skills Presentation and communication skills
Contents of the module	Elaboration of the Master Thesis
Teaching methods of the module	Individual research work
Total workload	900 hours
Language of the module	English
Frequency of the module	Each semester
Module coordination	Prof. Dr. Michael Peterek
Further information	

## Unit description of Unit UA 10.1

Name of the unit	<b>UA 10.1 Master Thesis</b>
Code	
Corresponding module	UA 10 Master Thesis
Lecturer	All professors of the Master Programme "Urban Agglomerations"
Contents of the unit	<p>The Master Thesis shall synthesise the different knowledge gained in the previous modules of "Urban Agglomerations" and proof that the candidate is capable of pursuing a scientific career.</p> <p>It consists of conceiving and writing a thesis and/or developing a conceptual planning study under the supervision of a professor involved in the master programme "Urban Agglomerations".</p> <p>The thesis can be co-supervised by a professor of one of the partner universities.</p> <p>Each student develops his/her topic independently in consultation with the supervisors.</p>
Teaching methods	Individual research work
Contact hours per week (SWS)	0,4 SWS
Total workload of the unit (h)	900 h
Total time of contact hours (h)	10 h
Total time of examination incl. preparation (h)	890 h
Total time of practical training (h)	
Total time of self-study (h)	
Language of the unit	English
Recommended reading	Depending on the topic of the Master Thesis
Type and form of assessment	Master Thesis and colloquium (min 30 min. max. 60 minutes)
Grading of the assessment	Differentiated grading (1,0 to 4,0)
Further information	