

# **Vorlesungsverzeichnis**

M.Sc. Integrated Urban Development and Design  
(PO 2020)

Sommer 2023

Stand 18.10.2023

**M.Sc. Integrated Urban Development and Design (PO 2020)**

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**M.Sc. Integrated Urban Development and Design (PO 2020)****119122403 Parametric Urban Design and Analysis II****E. Fuchkina, S. Schneider, I. Osintseva**

Veranst. SWS: 2

Seminar

Di, wöch., 13:30 - 15:00, Belvederer Allee 1a - Allg. Medienpool 003, 04.04.2023 - 04.07.2023

**Beschreibung**

Cities are complex human made objects. They consist of thousands of elements and need to satisfy numerous human needs. The definition of urban form (street network, plots, building volumes) is a crucial step in the planning of cities because it has the longest lasting effect on their social, economic and ecological performance. Thus, this step needs to be undertaken with greatest care. In this course we will deal with computational methods to support this process.

The course extends the knowledge and methods you learned in PUDA I. You will learn and train advanced parametric modeling techniques and further analysis methods as well as basic knowledge about statistics to study relationships between urban form and its manifold functions.

You apply the learned skills in an urban planning project for new towns in Ethiopia (IUDD Study Project "Circular Urbanism"). It is expected that the participants have absolved the course "Parametric Urban Design and Analysis" from the previous semester.

**Voraussetzungen**

Studiengänge: Master Integrated Urban Development and Design (IUDD)

**119122703 European Spatial planning****G. Bertram, T. Potezica**

Veranst. SWS: 2

Seminar

Do, unger. Wo, 09:15 - 12:30, Belvederer Allee 5 - Seminarraum 008, 13.04.2023 - 20.04.2023

Do, wöch., 09:15 - 12:30, Marienstraße 9 - Seminarraum 203, 27.04.2023 - 06.07.2023

**Beschreibung**

The seminar "Spatial planning" is part of the module "European cities". It is specifically designed for students of the master program "European Urban Studies, M.Sc." but is open to other master programmes (Urbanistik, IUDD, Erasmus...). The aim of the seminar is to develop an understanding and a wider reflexion of the diversity of planning cultures in Europe through the analysis of models, theories, key concepts and case studies. We will explore the topic through a set of questions: what are the main principles of spatial planning in European countries? What are the main, and somehow contradictory, challenges spatial planning must face? To what extent is spatial planning able to maintain social and territorial cohesions and to integrate the sustainability imperatives? What are the political and planning responses and what kind of instruments are developed?

The methods of the seminar will be a combination of lectures by the instructors, student presentations and discussions. We will look at the following countries: Serbia, the Netherlands, Great Britain and Germany. To explore contemporary challenges students will give presentations on specific projects within these countries. Finally, we will look at key concepts of spatial planning on the scale of Europe.

**Final grade:** active participation, individual paper, presentation

**Language:** English

**Appointment:** Thursdays, 9.15-12.30: 13.4., 27.4., 1.6., 8.6., 22.6., 29.6., 6.7.

**Start:** 13.04.2023

**Where:** Belvederer Allee 5, Room 008

**Credit hours:** 2

**ECTS credits:** 3

**Max:** 20 Students.

The seminar is compulsory for the students of the Master "European Urban Studies". If you are not involved in the EUS Master and if you want to attend the seminar, please contact Tanja Potezica **first:** [tanja.potezica@uni-weimar.de](mailto:tanja.potezica@uni-weimar.de)

#### **Bemerkung**

**Appointment:** Thursdays, 9.15-12.30: 13.4., 27.4., 1.6., 8.6., 22.6., 29.6., 6.7.

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### **119123701 Introduction to Masters´ Thesis**

**M. Bielik, P. Schmidt, S. Schneider**

Veranst. SWS: 2

Seminar

Mo, wöch., 10.04.2023 - 03.07.2023

#### **Beschreibung**

The preparatory seminar is a combination of various aspects that support students to prepare and organise their master's thesis. It aims to the individual thematic development of the thesis topic. Derived from the subject areas of IUDD the thesis refers to the inductive development of interdisciplinarity. Students are guided through the logic of research, the definition of individual research interest and the more objective need to communicate specific knowledge related to a certain subject of interest. At the end of the seminar, a thesis proposal should be developed based on an adequate research framework and research design, considering methodological aspects and quality of research. This seminar is arranged as intensive workshop with lectures, discussions, exercises and group work.

### **121123302 Urban Modeling and Simulation (UMS) - Advanced**

**R. König**

Veranst. SWS: 2

Seminar

Do, wöch., 06.04.2023 - 06.07.2023

**Beschreibung**

Im Rahmen des Seminars werden die Teilnehmer in Methoden der Stadtsimulation eingeführt. Wir werden uns mit der Modellierung komplexer räumlicher Systeme auf regionaler und urbaner Ebene befassen. Es werden Analyse zur Nutzung urbaner Strukturen eingeführt (z.B. Fußgängerströme oder ökonomische Potentiale) sowie Modelle für Interaktionen von Flächennutzungen vorgestellt. Es wird vorgestellt, wie mittels System Dynamics Modellen zeitliche Veränderungen von „Stocks and Flows“ simuliert werden können.

**Bemerkung**

Die im Rahmen von Online-Seminaren vermittelten Kenntnisse werden in Konsultationen vertieft und anhand mehrerer Übungsaufgaben belegt. Es sind keine technischen Vorkenntnisse erforderlich.

Appointment: Thursday (integrated in IUDD planning project) // Termin: Donnerstag (integriert in IUDD Planungsprojekt)

**121123701 GIS for Integrated Urban Development Part II****M. Mousa**

Veranst. SWS: 2

Seminar

Mo, wöch., 13:30 - 15:00, Bauhausstraße 9c - Arbeitsraum 004, 03.04.2023 - 03.07.2023

**Beschreibung**

Geographic Information Systems (GIS) are a useful tool for multiple disciplines and user groups. In urban development and planning, different constituencies like local authorities interact through GIS e.g. applying it in environmental agencies, transportation, energy, resource and waste management, retail, disaster management, and socio-economics. Collecting, managing, analysing and visualising data with GIS as an information sharing tool can help in different stages of planning processes – from identifying problems to evaluating different planning proposals. Working with GIS allows to create easy understandable maps and to enable communication processes.

This course introduces different spatial analysis of Vector and Raster data based on ESRI ArcGIS Toolbox tools. For developing a complex process through different tools, ModelBuilder will be applied to connect different tools and automates workflow based on different variables and parameter. The participants will be introduced to ModelBuilder interface, properties and how to create, run and edit the Model. Various spatial analysis qualifications will be gained such as where to allocate each use/service based on pre-identified criteria.

Basic knowledge of ArcGIS is required for the course such as create, edit and deal with Geodatabases, feature dataset, feature classes, data selection and visualization.

The course will be assessed based on assignment and final project where participants create their own models and present it. This will be based on an excursion to Chemnitz in the second half of the semester where participants will apply their mapping capacities in GIS in the context of a pedestrian analysis.

**121223802 Parametric Energy Modelling and Analysis: Introduction to energy modelling in the urban context****J. Becker, R. König**

Veranst. SWS: 2

Seminar

Fr, wöch., 09:15 - 10:45, 07.04.2023 - 07.07.2023

**Beschreibung**

In this module, urbanist and civil engineer Jakob Becker will give insights into energy modelling and simulation in the building context using the programming environment Grasshopper for Rhino.

First, we introduce the students to the basics of the visual programming environment Grasshopper for Rhino (this course does not require experience in working with Grasshopper), of energy-focused architecture and of working with energy and weather data. Afterwards, the students are guided through different examples of energy simulation applied in urban contexts with the main focus lying on solar radiation simulation and adjacent fields, such as daylight simulation, energy gains calculation, location optimization and geometry definition based on solar radiation and climatic conditions.

This module will give insights into solar urban planning principles and aims to raise the awareness of integrating local climatic conditions into the process of urban planning.

The course is held at the university as well as online. Teaching language is English.

### 122122401 Integrated Urbanism - Adaptive Planning Strategies for Rural-Urban Transformation in Ethiopia.

**S. Schneider, R. König, P. Schmidt, M. Bielik**

Veranst. SWS: 10

Projektmodul

Do, wöch., 09:15 - 18:30, 06.04.2023 - 06.07.2023

#### Beschreibung

The transformation from a mainly agricultural society to industrialisation that is faced these days in Ethiopia is linked to substantial changes of the country's rural and urban areas. With these shifts, the processes of urbanisation and expectations towards modernisation is seen as a chance to create new and adaptive urban planning proposals that meet specific needs and conditions of the Ethiopian development context in Sub-Saharan Africa. While the World Bank is promoting rapid economic growth for Ethiopia, still the country is one of the poorest countries in the world, and the question arises in how far urban design and planning can create concepts and flexible urban models that are reactive enough to stimulate different scenarios responding for balanced development.

One of the main frameworks to create such a balance for emerging cities are the United Nations Sustainable Development Goals (SDG). Different key factors like food security, energy, water and sanitation are linked to resource questions of material and land and how those can be influential on the development of prospective cities. Thus, for the development of new towns in rapidly urbanizing regions the understanding of material flows and circulation within the urban system is crucial when it comes about any building activity that determines the urban form and what we finally experience as urban, including open and public space and healthy living conditions.

To better understand how such flows of material resources and energy are linked to building activities in rural urbanisation processes and their impact on the existing environment, in our study project, we are referring to urban metabolism as a framework for urban design and planning of small cities.

Participants will be analysing urban patterns and flows of small cities, learn about the context between urban metabolism and its spatial implications and apply tools and methods for a spatial analysis and finally implement that knowledge in spatial models and concepts to simulate possible development scenarios.

#### Voraussetzungen

Studiengänge: Master Integrated Urban Development and Design (IUDD)

### 123120201 Resiliente Interventionen in der Seestadt Aspern / Residiert Interventionspunkte in Seestadt Aspern

**B. Nentwig, P. Schroeder**

Veranst. SWS: 8

Projektmodul

Do, wöch., 09:15 - 16:45, Bauhausstraße 9c - Arbeitsraum 103, 06.04.2023 - 06.07.2023

Do, Einzel, 09:15 - 14:00, Bauhausstraße 9c - Arbeitsraum 103, 13.07.2023 - 13.07.2023

#### Beschreibung

deutsch:

Der 2007 in einen internationalen Wettbewerb prämierte Masterplan (Tovatt Architects & Planers; nplus Prof. Nentwig) für das ehemalige Flugfeld Aspern ist als eine der größten europäischen Stadtentwicklungen zu einem Referenzprojekt für nachhaltige Entwicklung und Mobilität geworden.

In Zusammenarbeit und Unterstützung mit der Wien 3420 aspern Development AG sollen in diesem Projekt im Sinne einer „Productive City“ Gewerbeentwicklungen in Verbindung zu integrierten Mobilitätskonzepten und der übergreifenden Nachhaltigkeitsthematik entwickelt werden.

Die Ergebnisse reichen von strategischen Planungen bis zu konkreten Entwurfsansätzen.

Im April 2023 ist eine Exkursion nach Wien geplant. Die Kosten belaufen sich auf ca. 400,- €.

englisch:

The masterplan (Tovatt Architects & Planners; nplus Prof. Nentwig ) for the former Aspern airfield, which was awarded a prize in an international competition in 2007, has become a reference project for sustainable development and mobility as one of the largest European urban developments.

In cooperation and support with Wien 3420 aspern Development AG, this project aims to develop commercial developments in the sense of a "Productive City" in connection with integrated mobility concepts and the overarching sustainability theme.

The results range from strategic planning to concrete design approaches.

A field trip to Vienna is planned for April 2023. The costs amount to approx. 400,- €.

#### **Bemerkung**

Wunschort und Zeit: Greenhouse, Raum 002, Do. 9.15 Uhr - ....., Beginn: 13. 04. 23

#### **Leistungsnachweis**

Präsentation und Dokumentation

### **123120204 Gender Planning Seestadt Aspern**

#### **B. Nentwig**

Seminar  
Do, wöch.

Veranst. SWS: 2

#### **Beschreibung**

In dem Seminar werden Aspekte der gendergerechten Planung am Beispiel der Seestadt-Aspern behandelt.

Auf der Grundlage von den tatsächlich realisierten Planungen werden in dem Seminar übertragbare planerische Interventionen entwickelt und bewertet.

In einer zweiten Stufe sollen persönliche Erfahrungen der Studierenden einfließen und in einem Essay dargestellt werden.

### **123123501 Material Constraints in the "Global South"**

#### **N.N., E. Vittu**

Seminar

Fr, Einzel, 11:00 - 15:00, Belvederer Allee 5 - Seminarraum 008, 28.04.2023 - 28.04.2023  
 Fr, Einzel, 11:00 - 15:00, Belvederer Allee 5 - Seminarraum 008, 16.06.2023 - 16.06.2023  
 Fr, Einzel, 11:00 - 15:00, Belvederer Allee 5 - Seminarraum 008, 30.06.2023 - 30.06.2023

### Beschreibung

In a complex interplay with available means—including technologies, machinery, capital and labour—material constraints impact buildings. Taking construction materials such as cement, concrete, steel or aluminium, as well as auxiliary materials (e.g. timber for formwork or scaffolding) as starting points for an investigation, and inquiring how these informed, challenged and reoriented architectural practice, we are going to nuance our understanding of the built environment.

Rather than focusing broadly on material qualities or supply chains, the seminar shall investigate how materials have constrained various (human) actors in building processes. More intriguing than the straightforward impact of different groups of actors (clients, builders, authorities) on the material outcomes of building processes are cases in which construction materials eluded the actors; for instance, when particular physical or chemical qualities, the lack of specific construction materials or the lack of skill or knowledge forced these various actors to seek different solutions or to deal with the failure of their attempts. This interest in (the resistance of) matter is not limited to planning and actual construction but also seeks to address questions of maintenance and decay of materials. In other words, we intend to inquire how construction materials constrained building processes as well as the material afterlife of sites – while perhaps simultaneously enabling completely different, unpredicted outcomes.

To address how local design and building practices in a variety of local settings were influenced and complicated or conflicted by regional and global processes of industrialisation of construction activities (and related branches of production such as metal processing), the temporal scope of the seminar is set on the (late) 19th century and the long 20th century. We are going to engage with transnational connections between European/ non-European locations, including, for instance, trans-imperial links during the colonial period (e.g. through multinational contractors) or the attempt to overcome entrenched material dependencies with the former metropolises in the post-independence period. The analyses may address aspects related to the human agency, such as logistics of (long-haul) transportation of materials, standardisation, bureaucracy, corruption etc. or areas of material constraints beyond the human agency, such as decay.

Through the interdisciplinary composition of the teaching team, we want to ensure that approaches from architectural and urban history remain in dialogue with global history, economic geography and STS to add to the complex perspectives on (architectural) materiality.

The block seminar invites students to work individually and in groups on literature and case studies, which will be presented (15 minutes presentations) and discussed during the seminar's two final meetings. Apart from the themes mentioned above, participants are strongly encouraged to propose their own research questions and case studies.

### Selected bibliography

Alonso, Pedro, and Hugo Palmarola, eds. *Flying Panels: How Concrete Panels Changed the World*. Stockholm, [Santiago de Chile], Berlin: ArkDes#; Ediciones UC#; DOM Publishers, 2019.

Forty, Adrian. *Concrete and Culture: A Material History*. 1st pbk. ed. London: Reaktion Books, 2016.

Slaton, Amy E. *Reinforced Concrete and the Modernization of American Building: 1900-1930*. Johns Hopkins Studies in the History of Technology. Baltimore: Johns Hopkins Univ. Press, 2001.

Slaton, Amy, ed. *New Materials: Towards a History of Consistency*. Ann Arbor, MI: Lever Press, 2020. <https://doi.org/10.3998/mpub.11675425>.

Wall, Christine. *An Architecture of Parts: Architects, Building Workers and Industrialisation in Britain 1940 - 1970*. 1st ed. Routledge, 2016.

### Bemerkung

Teachers: Dr. Monika Motylinska, Paul Sprute, Maria Jeldes

Start: 28 April 2023 from 11 a.m.; two further dates each Friday in the course of the semester (in consultation with the participants, preferably on 16 and 30 June).



**Leistungsnachweis**

presentation/testat

**Master-Colloquium****P. Schmidt**

Kolloquium

wöch.

**Beschreibung**

The course is the platform for presentation and discussion of the Masters theses. The candidates will present the intermediate results of their work on their individual topics. Suggestions for further action will be made by fellow students and academics attending the colloquium. Admission for the Master examination is required for participation. Performance record (attestation) will be achieved by giving an oral presentation.

**engl. Beschreibung**

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**Bemerkung**

Time:Block course, see notice-board

Location:Belvederer Allee 5

Start: See notice-board

Registration: Not necessary, all students accepted for the Master examination have to participate

**Voraussetzungen**

Admission for the Master examination is required for participation.

**Leistungsnachweis**

Performance record (attestation) will be achieved by giving an oral presentation.

**Modellprojekteforum IUDD****P. Schmidt**

Veranst. SWS: 2

Seminar

Mi, Einzel, 13:30 - 22:00, Geschwister-Scholl-Str.8A - Oberlichtsaal 213, 19.04.2023 - 19.04.2023

Mi, Einzel, 13:30 - 22:00, Geschwister-Scholl-Str.8A - Besprechungsraum 102, 19.04.2023 - 19.04.2023

Mi, Einzel, 13:30 - 22:00, Geschwister-Scholl-Str.8A - Seminarraum 105, 19.04.2023 - 19.04.2023

Do, Einzel, 08:00 - 22:00, Geschwister-Scholl-Str.8A - Oberlichtsaal 213, 20.04.2023 - 20.04.2023

Do, Einzel, 08:00 - 22:00, Geschwister-Scholl-Str.8A - Besprechungsraum 102, 20.04.2023 - 20.04.2023

Do, Einzel, 08:00 - 22:00, Geschwister-Scholl-Str.8A - Seminarraum 105, 20.04.2023 - 20.04.2023

BlockWE, 08:00 - 22:00, Geschwister-Scholl-Str.8A - Oberlichtsaal 213, 21.04.2023 - 22.04.2023

BlockWE, 08:00 - 22:00, Geschwister-Scholl-Str.8A - Besprechungsraum 102, 21.04.2023 - 22.04.2023

BlockWE, 08:00 - 22:00, Geschwister-Scholl-Str.8A - Seminarraum 105, 21.04.2023 - 22.04.2023

So, Einzel, 08:00 - 14:00, Geschwister-Scholl-Str.8A - Oberlichtsaal 213, 23.04.2023 - 23.04.2023