

Vorlesungsverzeichnis

English-taught courses of the Faculty

Sommer 2023

Stand 23.03.2023

English-taught courses of the Faculty

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English-taught courses of the Faculty

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 - 27.04.2023

Do, wöch., 09:15 - 12:30, Belvederer Allee 5 - Seminarraum 008, 01.06.2023 - 08.06.2023

Do, wöch., 09:15 - 12:30, Belvederer Allee 5 - Seminarraum 008, 22.06.2023 - 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

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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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)

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.

122112401 Parametric Architecture (Ba)

E. Fuchkina, I. Osintseva, S. Schneider

Veranst. SWS: 2

Übung

Mo, wöch., 15:15 - 16:45, Belvederer Allee 1a - Allg. Medienpool 003, 17.04.2023 - 03.07.2023

Beschreibung

Parametric Modeling is a powerful tool in the architectural and urban design process. By creating models, that do not only represent the geometry but rather relationships between the geometrical elements it becomes possible to create numerous variations of a design concept. These design variants can be analysed and optimized for certain criteria. Thereby the designer gains a deeper insight into his/her design concept.

In this seminar you will learn the basics for parametric modeling using the visual programming software Grasshopper for Rhino. After this basic training you apply the methods to an own design concept (architectural or urban scale). For the course no prior knowledge is required.

Bemerkung

Mo, 15:15 - 16:45 Uhr

Ort: Computerpool EG, Belvederer Allee 1a

Umfang: 3 ECTS

Voraussetzungen

Studiengänge: Bachelor Architektur und Bachelor Urbanistik

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)

122122403 Parametric Architecture

E. Fuchkina, I. Osintseva, S. Schneider

Veranst. SWS: 2

Seminar

Mo, wöch., 15:15 - 16:45, Belvederer Allee 1a - Allg. Medienpool 003, 17.04.2023 - 03.07.2023

Beschreibung

Parametric Modeling is a powerful tool in the architectural and urban design process. By creating models, that do not only represent the geometry but rather relationships between the geometrical elements it becomes possible to create numerous variations of a design concept. These design variants can be analysed and optimized for certain criteria. Thereby the designer gains a deeper insight into his/her design concept.

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Bemerkung

Mo, 15:15 - 16:45 Uhr

Ort: Computerpool EG, Belvederer Allee 1a

Umfang: 3 ECTS

Voraussetzungen

Studiengänge: Bachelor Architektur und Bachelor Urbanistik

123112401 Parametric Architecture - Advanced (Ba)

E. Fuchkina, I. Osintseva, S. Schneider

Veranst. SWS: 2

Übung

Mo, wöch., 15:15 - 16:45, 17.04.2023 - 03.07.2023

Beschreibung

This course is an upgrade to the "Parametric Architecture" seminar. If you want to deepen your knowledge, you take this course additionally and get extra tasks in parallel to the ones of the basic course.

Bemerkung

Mo, 15:15 - 16:45 Uhr

Ort: Computerpool EG, Belvederer Allee 1a

Umfang: 3 ECTS

Voraussetzungen

Studiengänge: Bachelor Architektur und Bachelor Urbanistik

123122401 Parametric Architecture - Advanced

E. Fuchkina, I. Osintseva, S. Schneider

Veranst. SWS: 2

Seminar

Mo, wöch., 15:15 - 16:45, 17.04.2023 - 03.07.2023

Beschreibung

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Bemerkung

Mo, 15:15 - 16:45 Uhr

Ort: Computerpool EG, Belvederer Allee 1a

Umfang: 3 ECTS

Voraussetzungen

Studiengänge: Bachelor Architektur und Bachelor Urbanistik

123123002 Stories of technology and the worlds they make

D. Perera

Veranst. SWS: 2

Seminar

Mo, wöch., 11:00 - 12:30, Geschwister-Scholl-Str.8A - Seminarraum 105, 17.04.2023 - 03.07.2023

Beschreibung

Description:

Stories of our technologies have always been central to our ways of world making.

With the growing power of certain forms of hegemonic technologies (ex: processes of digitalization) many scholars have called for questions of technology within ecological transformation to be considered in terms of multiple ontologies, 'a world where many worlds fit'. This framework presents a direct challenge to universalist ideas of technology perpetuated by modernity where certain faulty assumptions embedded in technologies are exported, internalized, and reproduced across contexts. Those of us operating in the fields of architecture, design, urbanism, media studies have yet to adequately reflect upon the ways in which we are implicated in cultivating or suppressing alternative kinds of technological thought, practices, stories.

This semester we will get together as a *reading group* to collectively read and explore *ten key texts* emerging from diverse fields of philosophy, media studies, computational studies, cybernetics, transformations research, decolonial studies, design and architecture that explore the relationships between stories, technologies and worldmaking in different ways. It is hoped that these readings would provide the participants with a conceptual toolbox to think through some of the most pressing questions related to technology and ecology of our times. As a part of the assignment the participants will get to design a framework for exchanging stories about alternative technological futures.

Bemerkung

Note: The reading group is related to a series of activities, online workshops and events in Germany and the UK in the context of a DFG research project. The participants will be able to design these workshops and participate in these events actively.

If you have any questions about the course contact: dulmini.perera@uni-weimar.de

Voraussetzungen

Master 1. FS