

234.154 ZUKUNFTSFRAGEN des Baubetriebs(1,5 ECTS) 234.154 The Future of Construction Processes



PROFILE

Aim of course

This lecture is for all master-students who are open-minded about innovation and future research in the field of construction processes. The seminar will be held in a “think-tank” style and will depend on an active exchange between the experts and participants.

Subject of course

The content is built upon the fundamental lectures of construction processes and methods presented in other courses at the institute. In this seminar, innovations like BIM, Smart-Site, digital knowledge-management-systems and specific solutions of start-ups are presented. Several research projects at the IBPM are developing methodology and ideas to optimize the processes on site. The presented topics of different stakeholders are the basis of the panel discussions. Whenever necessary, issues of construction-processes are discussed from the perspective of other scientific disciplines. Participants are encouraged to think outside of the box and develop future visions of construction processes themselves.

The seminar is held only in summer semester in odd years (2019, 2021, 2023,...).

Lecturers Univ.Prof. DI Dr. Gerald **GÖGER**
DI Leopold Winkler, and Experts

Further information and course registration available at TISS

Course number:
234.154



EXAMINATION MODALITIES



Grading

- Attendance is required to **five out of 6 classes** to receive a grade.
- A seminar is where the lecturers and the students **discuss topics**. Therefore, **active participation during the panel discussions** is required.
- An essay with a well-researched literature review and discussion about one of the covered topics (ca 2.500 words, maximum of 4 illustrations, in proper technical English) will be due two weeks after the last lecture.

ECTS distribution

- Workload: 1,5 ECTS x 25 h/ECTS = 37,5h
- Classes: 6 x 3h = 18h
- Self-study and essay: 19,5h

Classes

- Each class has **three topics** in a certain field of construction processes. There is a discussion after every presentation.
- The presentations are held in English
- Presentation: 40 minutes
- Discussion: 15 minutes

STRUCTURE OF THE COURSE

Research at the IBPM

- Goger: digital construction processes
- Assitants: short presentation of research topics
- Schranz: ZDB
- Mazak / Huymajer: digital research matrix

Future issues for design & engineering

- Eichler: Building Information Modelling (BIM)
- Schedler: Projects and issues of the planning
- Ganspöck: Digital data acquisition of existing buildings

Future issues for the construction

- Winkler: Digitalization of processes at Porr
- Pralle: Research and Development at Strabag
- Wenighofer: Concrete monitoring and formwork planning

Future issues for construction management and operation

- Reismann: Data chains & quality
- Höhne: Lean Construction
- Zwieler: BIM Consulting-Coordination-Collaboration

Developments for the construction Industry

- Maroschek: digital data-monitoring-systems
- Reinold: Prefabricated brickwork
- Altmann: digital construction processes

Excursion Smart Site Aspern

- Schuster: Research and ongoing construction

