

## Advanced Construction and Building Technology / M.Sc.

### Applications are currently not possible!

"Nothing is permanent except change"  
Heinrich Heine



Frontier engineering sciences increasingly breed innovations. These innovations are driven and amplified by globalization, closed loop resource utilization, transformation of technological potentials, environmental and demographic challenges.

Global competition brought inflationary labour capacities resulting in decreasing labour costs. But to achieve welfare and culture any society needs sufficient income. To provide sufficient income for creating wealth and culture one has to be efficient. "One has to be good to be expensive": High income is based on high tech, if you can't just sell natural resources. The demographic change requires even more efficient socio-economical and socio-technical processes to be affordable.

The notion of "Made in Germany" is internationally famous for its cars, machines, industrial facilities, and medical and environmental technologies. Its success is based on research and innovation, stressing that future wealth can only be generated by innovational leaps and radically new types of value design and engineering. Half of total investment is allocated in built environment, infrastructure, and facilities, signifying the strategic importance of the construction sector.

The Master of Science in Advanced Construction and Building Technology is tailored to offer solutions to

the above mentioned challenges. The future construction sector will expand to new business fields by absorbing advanced technologies from various disciplines. Its success will depend on its innovation leap ability of the complete value chain of the artefactual engineering and built environment by embedding ICT, automation, robotics and services. This approach will create new markets, qualifications, skills and professions.

Even though architecture and construction are the focal points of this Master Course, it crosslinks considerably to other disciplines and faculties such as potential psycho-social health transformation of future societies and incubates it into augmented skill formation for socio-technical qualifications of next generation engineers.

Future socio-ecologic engineers will be prepared to tackle yet unknown challenges by designing solutions for future technology, economy, ecology and society. They apply frontier science competence and define crossdisciplinary domains permanently. The Master Course of Advanced Construction and Building Technology can be considered as an incubator for strategic design and development of continuous improvement and innovation for life long learning.