New Perspectives for Geomatics Bachelor and Master Education at the HafenCity University, Hamburg
Topics of the presentation

- Introduction
- The HafenCity University Hamburg (HCU)
  - Historical background
  - Future orientation
- Curriculum
  - Teaching at the HCU
  - Geomatics at the HCU
  - Nontechnical courses
  - Studium Fundamentale
- Conclusion

HafenCity University – Historical Background

HafenCity University

- Architecture
  - University of Fine Arts
- Architecture Civil Engineering Geomatics
  - University of Applied Sciences
- Urban Planning
  - Technical University
HafenCity University – Future Orientation

General structure and goals

- Focusing university
- Creative university
- Student-centered university
- Researching university
- Dialogue and cooperation
**Programs of study**

![Diagram showing research areas and programs at HCU](image)

**e.g. bachelor studies at undergraduate level**

Bachelor 6 semester

- **Soft Skills** (presentation techniques etc.)

- **Common Courses (Studium Fundamentale)**
  - scientific contents program architecture
  - scientific contents program civil engineering
  - scientific contents program geomatics
  - scientific contents program urban planning

- **Elective Modules (interdisciplinary)**
Three keywords for teaching

- **Disciplinarity (80%)**
  Excellence in one’s own topic

- **Interdisciplinarity (10%)**
  Appreciation and understanding of neighboring disciplines

- **Transdisciplinarity (10%)**
  Open-minded attitude to radically different perspectives

Geomatics at the HCU

- Bachelor and both masters accredited

- **Bachelor of Science Geomatics (3 years)**

- **Master of Science Geomatics (2 years)**

- **Master of Science Hydrography (2 years)**

- International course
Geomatics at the HCU

- Innovative partner for spatial questions around the topics construction and urban development
- Thematic focus for networking at HCU:
  - 3-d data acquisition and data modeling
  - Spatial information systems and geo-visualization
- Focus in teaching and research:
  - Bachelor Geomatics: Geodetic Basics
  - Master Geomatics: GI-Technology / Metrology
  - Master Hydrography: Survey of coastal waters

Nontechnical courses – really NONtechnical?

- adequate wide engineering foundation (by DFG)
  - qualifies for technical solutions
  - ability to interact with other disciplines
  - basic knowledge of economics and social science
  - ability for lifelong learning
- approx. 10% of Geomatics curriculum in Germany
- Multiplicity of names (Studium Generale, Softskills etc.)
- Common nontechnical content in Geomatics study
  - law and administration business
  - technical English, project management
  - techniques of presentation and academic work
## Studium Fundamentale

### Transdisciplinary work
- Increasing creativity, communication skills and the ability of reflection
- Confrontation with radically different ways of thinking
- Question the expertise leading to new methods

- Similar concepts in St. Gallen or Witten-Herdecke
- Appears in different study programs but not yet in context of construction and urban development

### not to be:
- accumulation of soft skills
- courses offered for self-realization and -awareness
- takeover of technical contents lost by bachelor and master structuring

### has to be:
- clarification of different ways of understanding and perciption
- comprehensive and collateral study
- training of reflection as a fundamental competence

- Integrated as required subject in all programs
- 15 CP in bachelor and 10 CP in master programs
Possible Contents

- Start-up phase in winter semester 2008/2009
- Lots of possible perspectives:
  - Musicology, theatre, sculpture etc.
  - Astronomy, natural science etc.
  - Ethics, philosophy etc.
- Achievement of new perspectives depends on discipline
- Will be supported by
  - University of Witten-Herdecke
  - Hochschule für Musik und Theater Hamburg

Conclusions

- Particular development of a compact university
- Studium Fundamentale: new kind of nontechnical training
- Benefit or success of transdisciplinary work is not certain
- Experiment for university teachers and students
- Risks for Geomatics Education at HCU:
  - 10% of study for future engineers is “wasted”
  - Hamburg Geomatics: “softened graduate”
  - Becoming meaningless in an “university for art and architecture of urban development”
Thank you for your attention!