GEOENGINE –
THE UNIVERSITY OF STUTTGART
INTERNATIONAL MASTER PROGRAM
WITH MORE THAN 6 YEARS OF EXPERIENCE

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Structure

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Introduction to GEOENGINE

- GEOENGINE = Geomatics Engineering
- 2 years international Master program at University Stuttgart (up to now: 1.5 years)
- Extensive theoretical background knowledge and application related topics
- Geomatics Department at the University of Stuttgart consists of four institutes:
  - Institute of Geodesy (GIS),
  - Institute of Engineering Geodesy (IIGS),
  - Institute of Navigation (INS) and
  - Institute for Photogrammetry (ifp).
- Part of the faculty of Aerospace Engineering and Geodesy

Introduction to GEOENGINE

- Started in 2006 with 5 students; now around 100 applications per year
- Requirements:
  - Qualified Bachelor of Science degree in Geodesy, Photogrammetry, or Surveying Engineering and
  - English language proficiency (level of 80 points for the internet-based TOEFL test or medium of instruction in home country)
- Other Bachelor studies are welcome: e.g. civil engineering or electronic engineers, computer scientists, physicists
- Online application via:
  http://www.geoengine.uni-stuttgart.de/application/application.html
Development – Applicants and Starting Students

Approx. 40% of the admitted students start.

Development – Master Theses

External theses: co-operation with industry and research institutes.
Internationality

Regions of origin (according to Anabin data base)

- Grp. 1: West-Europe
- Grp. 2: East-Europe & Russia
- Grp. 3: Near/Middle East
- Grp. 4: Asia
- Grp. 5: Africa
- Grp. 6: Australia
- Grp. 7: North-America
- Grp. 8: Middle- & South-America

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Internationality

Number of students per regions of origin and year

- 50 % from Asia, most from China, then India, Pakistan.
- 2nd largest group: Near East, most from Iran.
- No students from Australia and North America.
GEOENGINE Re-Design

Change from 1.5 years to 2.0 years study course!

Why?
- high work load during the three semester course
- two year master is the standard for Universities in Germany (TU9 decision)

What?
- curriculum more relaxed
- new modules e.g. engineering geodesy
- more elective modules
GEOENGINE Re-Design: Modules

Mandatory Modules
- Advanced Mathematics (6 CP)
- Geomatics Methodology (15 CP)
- Engineering Geodesy (9 CP)
- Geodesy (9 CP)
- Remote Data Acquisition (9 CP)
- Representation of Geodata (9 CP)
- Law (3 CP)
- Language and Culture (6 CP)
- Integrated Fieldwork (6 CP)
- Master Thesis (30 CP)

Elective Modules
- Multisensor Integration
- Satellite Geodesy
- Navigation
- Geo-Telematics
  - 9 CP each,
  - two out of four

Integrated Fieldwork
- Typical structure of a project
- Groups of three to four persons
- Training of team work, project management, presentations and scientific writing
- Different tasks every day, e.g. trigonometric leveling, kinematic survey, three-dimensional reference frame and terrestrial laserscanning
- 2012 project: planning a new water conduit for the pump storage station
Scholarships

- IGI Ingenieurgesellschaft für Interfaces mbH
- Microsoft Photogrammetry Vexcel Imaging
- DAAD STIBET scholarships

375 EUR per month, 6 months period, 1 person each

250 EUR per month, 3–5 months period, 3–5 persons

Excursions

- National aeronautics and space research centre of Germany (DLR)
- Leica Geosystems
- Intergraph/ZI company
Social Activities

- Meet and Greet
- GEOENGINE Seminar
- International Evening
- Football tournament

Summary

- M.Sc. in Geomatics Engineering
- Great Success: from 5 students in 2006 to 30 students in 2012
- Students from (almost) all over the world
- 2 years of study / 120 Credit points
- Mandatory and Elective Courses: great mixture of theory and applications
- Project: Integrated Fieldwork
- Excursions and Social Activities
- Required: Qualified B.Sc. and English knowledge
- Online application possible!
Thank you very much for your attention!

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