

Engineering Geodesy I HS 2010

Master Geomatics Engineering and Planning

(Course is held in English)

Wednesday, 13:45 – 16:30

HIL D 53 / HIL C 71.3

Date	13:45 – 14:30	14:45 – 15:30	15:45 – 16:30
Wed, 22.09.10	Administration D 53 Mautz	L: Introduction D 53 Ingensand	
Wed, 29.09.10	LE: Instruments, Sensors, Beaconing (Demonstration) C 71.3 & C 71.2 Ingensand, Mautz		
Wed, 06.10.10	LE: Instruments, Sensors (Demonstration) C 71.3 & C 71.2 Ingensand, Mautz		
Wed, 13.10.10	L: Sensor Networks C 71.3 Mautz	L: Sensors for Indoor Positioning C 71.3 Mautz	
Wed, 20.10.10	E: Sensor Data Flow & Visualization C 71.3 Mautz		
Wed, 27.10.10	X: 13:00 Excursion to the Paul Scherrer Institute Bus Stop ETHZ Höggerberg, Mautz, Ingensand		
Wed, 03.11.10	E: Deformation Analysis & Monitoring using TPS C 71.3 Mautz		
Wed, 10.11.10	L: Deformation Analysis C 71.3 Mautz	E: Eng. Geodesy Project C 71.3 Mautz, Theiler	
Wed, 17.11.10	Rothacher: Satellite Geodesy, Compensation for Excursion		
Wed, 24.11.10	E: 12:00 Engineering Geodesy Project, Object observation Mautz, Theiler		
Wed, 01.12.10	L: Barrages, Dams, Natural Hazards, Bridges, Towers C 71.3 Ingensand	E: Eng. Geodesy Project C 71.3 Mautz, Theiler	
Wed, 08.12.10	E: Engineering Geodesy Project, Data Analysis C 71.3 Mautz, Theiler		
Wed, 15.12.10	X: 7:00 Excursion to AlpTransit (Ceneri, Sigirino), Zurich Main Station, Mautz, Ingensand		
Wed, 22.12.10	Presentations of Engineering Geodesy Projects D 53 Students		

L: Lecture E: Exercise X: Excursion

Information: Rainer Mautz HIL D 45.2 044 633 78 27 mautz@geod.baug.ethz.ch www.geometh.ethz.ch

→ turn over

Organisation

The course consists of lectures, exercises and an excursion. The exercises are carried out in groups of 3 or 4 students.

Lectures:	Prof. Dr. Hilmar Ingensand D 43.3 ingensand@geod.baug.ethz.ch 044 633 30 56
Organisation, exercises:	Dr. Rainer Mautz (main contact person) D 45.2 mautz@geod.baug.ethz.ch 044 633 78 27
Course attendance requirements:	Presence in all lessons and excursions and exercises
Exam:	Oral exam alone (15 min.) or in a group of two (30 min.): Contents of all lectures and exercises
Documents:	Information and documents can be found on the web: www.geometh.ethz.ch > Link „students (restricted)“
Lecture notes:	Prof. Ingensand: Ingenieurvermessung
1. Exercise	Handling the data flow: from sensor to visualisation
2. Exercise	Deformation measurements & monitoring: Detection of small movements using total stations.
3. Exercise	Engineering Geodesy Project: Group work using modern instruments to automate observations. Presentation of the results at the end of the term.

Rainer Mautz, September 2010