

GED 507 Geodetic Linear Estimation Theory (3+0+0) 3 ECTS 10
Autumn 2019-2020

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COURSE DESCRIPTION

Probability, determinism, random variables and sampling in geodesy. General procedure of geodetic methodology. Concepts of, and relations between observation, model and solution spaces. Linear mean square estimation of parameters of observation, model and solution spaces. Generalized inverse.

COURSE CONTENT

Concepts of Observation and the Model
Statistical Concepts
Error Properties
Principle and Techniques of Propagation
Introduction to Least Squares Adjustment
Adjustment with Conditions Only
Examples and General Discussion on Adjustment with Conditions Only
Least Squares Adjustment with Conditions and Constraints
Adjustment with Derived Observations and Adjustment in Steps
Numerical and Statistical Consideration in Adjustment

COURSE OBJECTIVES

To introduce how to obtain the best possible model parameters using observational data

GRADING

Homework	30%
Midterm exam	30%
Final exam	40%