

## Multivariate Statistics – December 9th till 12th, 2019

Design of Experiments (Mon-Tue)

Monday (9-17)

1. Introduction
2. Full factorial designs
3. Analysis of DOE data – An overview
4. Experimental objective: Screening

Tuesday (9-17)

5. Analysis of DOE data – Causes of bad models
6. Post-screening actions
7. Experimental objective: Optimization
8. Basic Principles of Design Space Estimation

Multivariate Data Analysis (Wednesday-Thursday)

Wednesday (9-17)

Chapter 1 – Introduction

Chapter 2 – Master your data using PCA

Chapter 3 – The importance of raw data analysis and pre processing

Chapter 4 – PCA applications

4a) Counterfeit modelling

4b) Raw material characterization

4c) Process modelling of a continuous chemical process

Thursday (9-17)

Chapter 5 – OPLS for regression, prediction and improved interpretation

Chapter 6 – Visualization and documentation of results

Chapter 7 – OPLS applications

7a) Discriminant analysis (OPLS-DA)

7b) Multivariate calibration

7c) Process modelling of a batch fermentation process