

Emnekode: **O0515142101**

Nytt emneforslag.

Primær fagsortering:

Fagområder:

Forkortet emnetittel:

Norsk emnetittel:

Nynorsk emnetittel:

Course title:

Ansvarlig fagperson:

Faglærere:

Primært studieprogram:

Studieprogram:

Studienivåkode:

Studiepoeng:

Url:

Versjonskode: **1**

Første undervisning: 2014 HØST Første eksamen: 2014 HØST

Matematikk

MULTIVARIAT ANALYSE

Multivariat data - og meta-modellering

Multivariate data - and meta-modelling

Professor II Harald Aagaard Martens

Teknisk kybernetikk - doktorgrad (ph.d.)

Doktorgrads nivå

7.5

Undervisning

1. Høst: 7.5SP

Undervisningsspråk

Engelsk

Vurdering

Muntlig J

Muntlig eksamen Bestått/Ikke bestått D

Øvingsoppgave Fullført/Ikke fullført

EmneInformasjon

Norsk

Emnets beskrivelse

Anbefalte forkunnskaper:

Forkunnskapskrav:

Faglig innhold:

Kursmateriell:

Læringsformer og aktiviteter:

Læringsmål:

English

Course description

Recommended prev. knowledge:

Required previous knowledge:

Academic content:

Principle Component Analysis

Partial Least Squares Regression

Classification and discrimination

Validation

Experiment planning

Multivariate metamodelling

Subspace identification and subspace regression

Course materials:

Martens & Martens (2001) Multivariate Analysis of Quality. An Introduction. J. Wiley & Sons Ltd (Monograph, 466 pages).

Tøndel and Martens (2014): Analyzing complex mathematical model behavior by PLSR-based multivariate metamodeling. WIRE, in press.44 pages.

Teaching methods and activities:

Lectures, mandatory group work and project

Learning outcome:

KNOWLEDGE: In-depth knowledge of techniques for multivariate analysis of data. Knowledge of data-driven modelling (metamodelling).

SKILLS: Be able to build models based on experimental data using the aforementioned methods.

GENERAL COMPETENCE: Skills in applying this knowledge and proficiency in new areas and complete advanced tasks and projects. Skills in communicating extensive independent work, and master the technical terms of multivariate analysis. Ability to contribute to innovative thinking and innovation processes.