COURSE DETAIL

MATHEMATICAL STATISTICS: STATISTICAL INFERENCE THEORY

Country Sweden

Host Institution Lund University

Program(s) Lund University

UCEAP Course Level Upper Division

UCEAP Subject Area(s) Statistics Mathematics

UCEAP Course Number

UCEAP Course Suffix

UCEAP Official Title MATHEMATICAL STATISTICS: STATISTICAL INFERENCE THEORY

UCEAP Transcript Title INFERENCE THEORY

UCEAP Quarter Units 6.00

UCEAP Semester Units 4.00

Course Description

The course covers sufficient statistics, factorization criteria, exponential families, Rao-Blackwells theorem, ancillary statistics, Cramér-Rao's bound, Neyman-Pearson's lemma, permutation test, and connection between hypothesis testing and confidence intervals. Asymptotic methods: maximum likelihood estimation, profile, conditional and penalized likelihood as well as hypothesis testing with likelihood ratio-, Wald- and score-method. Bayesian inference: estimation, hypothesis testing, and confidence interval and the difference compared to frequentist interpretation.

Language(s) of Instruction

English

Host Institution Course Number MASC02

Host Institution Course Title MATHEMATICAL STATISTICS: STATISTICAL INFERENCE THEORY

Host Institution Campus

Lund

Host Institution Faculty

Science

Host Institution Degree

Host Institution Department Math

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