

# COURSE DETAIL

## STATISTICAL MODELS

**Country**

Hong Kong

**Host Institution**

University of Hong Kong

**Program(s)**

University of Hong Kong

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Statistics

**UCEAP Course Number**

127

**UCEAP Course Suffix****UCEAP Official Title**

STATISTICAL MODELS

**UCEAP Transcript Title**

STATISTICAL MODELS

**UCEAP Quarter Units**

5.00

**UCEAP Semester Units**

3.30

## Course Description

This course examines fundamental concepts in probability and mathematical statistics, including probabilistic modelling, limiting results, estimation and hypothesis testing. Topics include random variables and vectors, distribution and quantile functions, covariance and correlation matrices, strong law of large numbers, central limit theorem, estimators and their (asymptotic) properties, parametric estimators (maximum likelihood, method of moments), (asymptotic) confidence intervals (mean and variance of a normal, difference of means of two normals, ratio of means of two normals), hypothesis tests (theory, power function, p-value, asymptotic tests, likelihood ratio tests).

### Language(s) of Instruction

English

### Host Institution Course Number

STAT3902

### Host Institution Course Title

STATISTICAL MODELS

### Host Institution Campus

### Host Institution Faculty

### Host Institution Degree

### Host Institution Department

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