



APPLIES TO ACADEMIC YEAR 2009/2010

## MET 3431 Statistics

### Programme

Bachelor in Arts and Management (1. year), Bachelor in International Marketing (1. year), Bachelor in Market Communication (1. year), Bachelor in Marketing (1. year), Bachelor in Public Relations (1. year), Bachelor in Retail Management (1. year), Bachelor in Tourism Management (1. year), Foundation Program in Marketeconomy

### Responsible for the course

### Department

Department of Economics

### Term

According to study plan

### ECTS Credits

7,5

### Language of instruction

Norwegian

### Introduction

This is a basic course in statistics. Main themes are descriptive statistics and statistical inference. In addition some emphasis is put on acquiring basic skills in mathematics.

### Learning outcome

#### Acquired knowledge:

- To see the relevance and use of statistics in marketing and economics
- To think critically about the application of statistical methods
- To understand the relation between the population and the sample at hand, and how it is affected by randomness
- To be aware that statistical methods are based on assumptions that must be checked
- To understand the underlying ideas behind estimation and hypothesis testing

#### Acquired skills

- To be able to handle fractions, functions and graphs; and be able to read mathematical notation that arises in statistical formulas
- To know how to use statistical software to produce graphics and numbers; to be able to interpret output from such software
- To be able to describe data with key statistics and graphical displays
- To be able to calculate simple probabilities and confidence intervals
- To know how to conduct tests of hypotheses for the mean and proportion in a population, or for the differences in mean in two populations
- To be able to do a regression analysis and interpret the result

#### Reflection

- The student should also be aware that statistical methods can be easily misused and misinterpreted. It is important that the judgment required for statistical analysis is fair and just.

### Prerequisites

None.

### Compulsory reading

#### Books:

Triola, Mario F. 2008. Essentials of statistics. 3rd ed. Boston : Pearson/Addison-Wesley

### Recommended reading

#### Books:

Sommervoll, Dag Einar. 2009. Mattespettboka. 1. utg.. Oslo: Gyldendal akademisk  
Ubøe, Jan. 2008. Statistikk for økonomifag. 3. utg. Oslo : Gyldendal akademisk

### Course outline

- Functions and graphs
- Describing data with measures of centrality and variation, as well as with graphical displays
- Discrete and continuous random variables
- Basic probability
- Estimation
- Confidence intervals
- Hypothesis testing
- Regression

### Computer-based tools

SAS JMP is used as a teaching tool.

### Learning process and workload

There are 48 hours of lectures, including 10 hours of demonstration of statistical software. The problems studied in class and given as homework assignments will serve as a basis for the final examination.

### Work requirement:

During the run of the semester 8 mandatory multiple-choice assignments will be given. These are submitted in Blackboard. Each assignment either passes or fails. The student needs at least 5 passes in order to take the final exam.

Outline of work load for a student:

Aktivitet	Timebruk
Lectures	48
Blackboard assignments	50
Working with SAS JMP (or some statistical software)	32
Textbook study	50
Exam preparation	20
<b>Total</b>	<b>200</b>

### Use of hours

#### Examination

The work requirement of the mandatory assignments must be met in order to take the final exam. The final exam is a five hour written individual exam.

#### Exam code(s)

MET 34311 Exam which accounts for 100 % of the grade in MET 3431 Statisticks, 7,5 ECTS credits.

#### Examination support materials

All aids + calculator TEXAS INSTRUMENTS BA II Plus™ are allowed.

Exam aids at written examinations are explained under exam information in our web-based Student handbook. Please note use of calculator and dictionary.  
<http://www.bi.edu/studenthandbook/examaids>

#### Re-sit examination

Students that have not passed five of the mandatory eight multiple-choice assignments must retake the exercises at the next scheduled course and must pass five of the eight submitted multiple-choice assignments.

Students that have not passed the written exam can retake the exam in the next semester.

### Additional information