



Bachelor's courses School of Business and Economics

VU University Amsterdam - Student- & Onderwijszaken - Exchange programme Vrije Universiteit - 2019-2020

Business Statistics

Course code	E_IBA1_BS ()
Period	Period 4
Credits	6.0
Language of tuition	English
Faculty	School of Business and Economics
Coordinator	dr. R. Heijungs
Examinator	dr. R. Heijungs
Teaching staff	A. Borowska, M. Li
Teaching method(s)	Lecture, Study Group
Level	100

Course objective

ACADEMIC AND RESEARCH SKILLS – STUDENTS CAN CONDUCT A BASIC INTERNATIONAL RESEARCH PROJECT FROM START TO FINISH

Academic Skills (three As)

After successfully completing this course, the student:

- can perform key statistical operations.

Research Skills

After successfully completing this course, the student:

- can solve real-world problems by using statistical techniques.

BRIDGING THEORY AND PRACTICE

KNOWLEDGE: Demonstrates theoretical and empirical knowledge concerning the relevant areas in international business administration

After successfully completing this course, the student:

- can select and apply the right statistical technique, specifically:
- properly use statistical notation (both passively and actively);
- calculate elementary probabilities;
- model events with the Bernoulli distribution, the binomial, uniform and normal distribution;
- calculate and interpret descriptive statistics (mean, median, variance, correlation coefficient, skewness, proportion, etc.);
- use the concepts population, sample and sample variation;
- calculate confidence intervals (for the mean, proportion and variance);
- distinguish statistical and practical significance;
- perform one sample tests (for mean, median, proportion and variance);
- perform two sample test (for mean, median, proportion and variance);
- create contingency tables and perform a chi-square test;
- perform multiple regression (including tests, confidence intervals and dummy's);
- perform one way ANOVA (including post-hoc-analysis);
- choose the right test for a given problem;
- visualize data and relationships;
- using software (R/RStudio/Excel) for the above topics.

APPLICATION: Can propose a solution to an international real-life business problem by applying relevant theories and methodologies.

After successfully completing this course, the student, is able:

- can read and write texts in which statistics occurs;
- can use standard software (R/RStudio/Excel) for solving statistical problems.

Course content

International business administration is a subject in which data is of prime interest. You can have great ideas on the impact of advertisement on sales, or of bonus wages on employer's performance, but the ultimate test is not the theory, but always the empirical data. These data, however, are often not fully conclusive. Sales go up on some days, but they go down on other days. Other factors make that what we see is noisy. Statistics helps you to make sense out of data. Further, today's analyses require basic skills in setting up and handling spreadsheets and visualizing data. This course therefore also addresses such general skills.

Form of tuition

Lectures

Tutorials

Computer tutorials

Type of assessment

Digital exams – individual assessment

Written exam – individual assessment

Surprise questions – individual assessment

Attendance and participation – individual assessment

Course reading

Doane, David P., and Lori E. Seward (2015/2019), Applied Statistics in Business & Economics, fifth/sixth Edition, McGraw-Hill

Additional documents via Canvas.

Entry requirements

n/a

Recommended background knowledge

1.1 Business Mathematics

1.3 Academic Skills

Remarks

You will work with R/RStudio and Excel. These programs are available on computers at the VU campus. R/RStudio can be downloaded for free. For Excel a cheap license for home use may be obtained from <http://www.surfspot.nl/>. At the digital exams we use the English language versions for Windows.