COURSE SYLLABUS
Introduction to Statistical Methods, 7.5 credits

Introduction to Statistical Methods, 7,5 högskolepoäng

Course Code:	JITG12	**Education Cycle:**	First-cycle level
Confirmed by:	Council for Undergraduate and Masters Education May 7, 2020	**Disciplinary domain:**	Technology
Valid From:	Aug 22, 2022	**Subject group:**	ST1
Version:	1	**Specialised in:**	G1N
		Main field of study:	Statistics

Intended Learning Outcomes (ILO)

On completion of the course the students will be able to:

Knowledge and understanding
1. Describe the role of centrality measures vs measures of spread
2. Understand the difference between point estimates and interval estimates
3. Describe and interpret hypothesis tests and confidence intervals
4. Discuss the meaning and use of the central limit theorem

Skills and abilities
5. Present and summarize data graphically
6. Calculate elementary probabilities
7. Perform statistical hypotheses testing concerning measures of centrality

Judgement and approach
8. Assess the general usefulness/weaknesses of the statistical analyses treated in the course
9. Be able to critically evaluate statistics in reports to make informed decisions

Contents

Some major topics covered in this course are:
• Descriptive statistics
• Random variables
• The normal distribution
• Sampling and sampling distributions
• Confidence intervals
• Hypothesis testing

Connection to Research and Practice

This course covers essential statistical topics necessary to understand any research reports and/or articles. The students learn to compile, calculate summary measures, and present different types of data. The aim is also to provide the ability to make simpler probability

calculations and, based on statistical assessments draw conclusions about unknown characteristics of different types of populations. The lectures and exercises provided involves many practical examples, and the computer assignment consists of applying the skills and abilities learned throughout the course to real-world data; presenting and evaluating different types of data and to infer properties of populations parameters, e.g., testing hypotheses and deriving estimates.

Type of instruction

Lectures, exercise sessions and a computer lab.

The teaching is conducted in English.

Prerequisites

General entry requirements and Mathematics 3b or 3c, Civics 1b or 1a1 and 1a2. Or: English B, Mathematics C and Civics A and required grade Passed or international equivalent.

Examination and grades

The course is graded A, B, C, D, E, FX or F.

Individual written exam (ILO 1-4,6-8) representing 6 credits.
Group written assignment (ILO 1-9) Pass/Fail, representing 1.5 credits.

Registration of examination:

Name of the Test	Value	Grading
Individual written exam[I]	6 credits	A/B/C/D/E/FX/F
Group written assignment[I]	1.5 credits	U/G

[I] All parts of compulsory examination in the course must be passed with a passing grade (A-E or U/G) before a final grade can be set. The final grade of the course is determined by the sum total of points for all parts of examination in the course (0-100 points). Grade is set in accordance to JIBS grading policy.

Course evaluation

It is the responsibility of the examiner to ensure that each course is evaluated. At the outset of the course, the programme evaluators in the course must be contacted. In the middle of the course, the examiner should meet the programme evaluators to identify strengths/weaknesses in the first half of the course.

At the end of the course, the examiner should remind students to fill in the survey. The examiner should also call a meeting with the programme evaluators to debrief the course, based on course evaluation data and comments. The next time the course runs, students should be informed of any measures taken to improve the course based on the previous course evaluations.

At the end of each study period, JIBS' Director of Quality and Accreditation crafts a "Course Evaluation Quarter Report", presenting the quantitative results from course evaluation surveys. The Associate Dean of Education, The Associate Deans of Faculty, Programme Directors, and JSA President and Quality receive the report.

Other information
Academic integrity

JIBS students are expected to maintain a strong academic integrity. This implies to behave within the boundaries of academic rules and expectations relating to all types of teaching and examination.

Copying someone else's work is a particularly serious offence and can lead to disciplinary action. When you copy someone else's work, you are plagiarizing. You must not copy sections of work (such as paragraphs, diagrams, tables and words) from any other person, including another student or any other author. Cutting and pasting is a clear example of plagiarism. There is a workshop and online resources to assist you in not plagiarizing called the Interactive Anti-Plagiarism Guide.

Other forms of breaking academic integrity include (but are not limited to) adding your name to a project you did not work on (or allowing someone to add their name), cheating on an examination, helping other students to cheat and submitting other students work as your own, and using non-allowed electronic equipment during an examination. All of these make you liable to disciplinary action.

Course literature

Literature
Compulsory literature
Anderson, Sweeney, Freeman, Williams and Shoesmith. Statistics for Business and Economics. South-Western CENGAGE learning. Latest edition.