



GRADUATE SCHOOL

GM1413 Advanced Data Analysis, 7.5 credits

Avancerad dataanalys, 7,5 högskolepoäng

Second Cycle

Confirmation

This course syllabus was confirmed by Graduate School on 2020-04-06 and was last revised on 2024-01-25 to be valid from 2024-09-02, autumn semester of 2024.

Field of education: Social Sciences 100%

Department: Graduate School

Position in the educational system

The course Advanced Data Analysis, is a course within the Master of Science programmes at the Graduate School, School of Business, Economics and Law, University of Gothenburg.

Main field of studies

Accounting and Financial Management

Specialization

A1N, Second cycle, has only first-cycle course/s as entry requirements

Entry requirements

To be eligible for the course Advanced Data Analysis, the participant must fulfil the entrance qualifications for one of the Master of Science programmes at the Graduate School. The participant must also have a minimum of 15 credits in Statistics, or 7.5 credits in Statistics and 7.5 credits in quantitative methods and/or Mathematics.

Learning outcomes

On successful completion of the course the student will be able to:

1. identify and extract useful data for analysis
2. clean and organize data into an analyzable format
3. analyze unstructured data in conjunction with other conventional provided data in

commercial databases

4. present results orally using appropriate visualization techniques.

Course content

The course discusses the usefulness of computer skills in the light of the ongoing global digitalization. In particular, the aim is to highlight the skills needed to understand and critically assess the usefulness of algorithms and AI. The course comprises components teaching how to find and extract data from different sources and discussions on available tools for handling and organizing data. Further, the course include components teaching how to clean data and use it in conjunction with traditional commercial business databases.

The course focuses on data handling using Python and to some extent statistical analysis. There are no prerequisite of programming knowledge.

Form of teaching

The teaching consists of lectures (live and pre-recorded videos) and seminars.

Language of instruction: English

Assessment

Learning outcome 1 and 2 are assessed through a group assignment (written report and oral presentation in class) and an individual written assignment.

Learning outcome 3 is assessed through an individual written assignment.

Learning outcome 4 is assessed through a group assignment (written report and oral presentation in class).

Mandatory seminars are clearly indicated in the course schedule. If the course coordinator agrees that the reason for absence or non-submission of compulsory elements is valid, then the missing elements can be replaced with alternative assignments.

A failed assignment can be supplemented to a Pass grade.

The individual assignment shall be written individually, cooperation in formulating text, tables, figures etc. is not allowed.

If a student, who has failed the same examined element on two occasions, wishes to change examiner before the next examination session, such a request is to be submitted to the department in writing and granted unless there are special reasons to the contrary (Chapter 6, Section 22 of Higher Education Ordinance).

In the event that a course has ceased or undergone major changes, students are to be guaranteed at least three examination sessions (including the ordinary examination

session) over a period of at least one year, though at most two years after the course has ceased/been changed.

The number of examinations is limited to five.

Grades

The grading scale comprises: Excellent (A), Very good (B), Good (C), Satisfactory (D), Sufficient (E) and Fail (F).

Pass is required on all examination forms. The grade (A-E) corresponds to the total score a student obtains on the individual written assignment (70 % of final grade) and written group assignment (30 % of final grade). To receive a pass grade (A-E) $\geq 50\%$ points is required. The scale is tied to fixed score intervals:

A: 85%-100%

B: 75%-84%

C: 68%-74%

D: 60%-67%

E: 50%-59%

F: $<50\%$

Course evaluation

The course will be evaluated upon completion. The results of and possible changes to the course will be shared with students who participated in the evaluation and students who are starting the course.