UNIVERSITY OF GOTHENBURG

DEPARTMENT OF APPLIED INFORMATION TECHNOLOGY

TIA044 Science and Research Methodology, 15 credits

Science and Research Methodology, 15 högskolepoäng

Second Cycle

Confirmation

This course syllabus was confirmed by The IT Faculty Board on 2006-11-15 and was last revised on 2019-06-19 by Department of Applied Information Technology to be valid from 2019-09-02, autumn semester of 2019.

Field of education: Science 100%
Department: Department of Applied Information Technology

Position in the educational system

The course can be given as a single subject course in the second cycle.

The course can be part of the following programme: 1) Digital Leadership Master´s Programme (N2DIG)

Main field of studies	*Specialization*
Applied Information Technology	A1F, Second cycle, has second-cycle course/s as entry requirements
Informatics	A1F, Second cycle, has second-cycle course/s as entry requirements

Entry requirements

To enter the course students should have attended courses equivalent to 60 higher education credits in Applied Information Technology on advanced level.The course is given in English and the student should have sufficient knowledge in spoken and written English to assimilate education at the advanced level.

Learning outcomes

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

Knowledge and understanding

- 1) present a working definition of science;
- 2) explain the characteristics of qualitative and quantitative research methods and their applicability to IT-faculty relevant problems;

Competence and skills

- 3) chose and motivate a research method given a particular research question and suggest alternative approaches;
- 4) design and carry out a small research project within the scope of the IT-faculty's domain;
- 5) communicate scientific results in an academic language and format;

Judgement and approach

- 6) critically reflect upon documented research efforts and identify and discuss both strengths and weaknesses with these approaches.

Course content

The objective of the course is to allow the student to gain knowledge in the philosophy of science and practical skills in research methodology so that the student is able to plan and carry out a research task, analyse one's own work and the work of others, and discuss, critique and assess research methodology with other students or researchers in a competent way.

The theoretical tools needed are learned through active participation in lectures and seminars, where opportunities to discuss the course content with lecturers and fellow students are provided. These tools are subsequently applied in minor research tasks where the student practices both qualitative and quantitative research activities under teachers' supervision.

Form of teaching

The course is organised as lectures, seminars, workshops and field exercises. During the lectures, a teacher guides an in-depth discussion about the course literature and the course content. In the seminars, the students discuss topics from selected texts. Workshops mean that we work with practical tasks and exercises in the classroom, whereas field exercises mean that the students - alone or in groups - practise their skills out in society. Most of the forms contain some sort of oral presentation from the students.

Language of instruction: English

Assessment

The course is examined through two modules: one report (3 credits) and one essay, presentation and workshop (12 credits).

If a student, who has failed the same examined component twice, wishes to change examiner before the next examination, a written application shall be sent to the department responsible for the course and shall be 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 same applies to work experience and VFU, although this is restricted to just one additional examination session.

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).
The report is graded either Pass or Fail. The essay, presentation and workshop are jointly graded either Pass with Distinction, Pass or Fail.

In order to receive a Pass for the course, it is required to have at least the grade Pass on both modules.

To receive the grade Pass with Distinction for the course, it is required to have the grade Pass with Distinction on the essay, presentation and workshop, and the grade Pass on the report.

Course evaluation

On completion of the course the students will be asked to fill in an anonymous course evaluation. The result of the evaluation will be reported to the course coordinator and a summary of the results together with improvement proposals will be made available to students and teachers.