



## HÖGSKOLAN I GÄVLE

### Philosophy of Science, Research Ethics, Quantitative and Qualitative Research Methods 7.5 cr

*Vetenskapsteori, forskningsetik, kvantitativ och kvalitativ metodik 7,5 hp*

Set by Faculty of Engineering and Sustainable Development

**Version**

**Set at**

**Valid from**

4/22/20

**HT2021**

<b>Level</b>	A1N
<b>Education level</b>	Second cycle
<b>Course identifier</b>	MIA007
<b>Credits</b>	7.5 cr
<b>Main field of study</b>	Sustainability Science
<b>Subject group</b>	Environmental Science
<b>Disciplinary domain</b>	Social sciences 40.0 % Technology 20.0 % Natural sciences 40.0 %

**Learning outcomes**

After completion of the course, the student shall be able to

1. describe and compare ontological and epistemological perspectives and theories of science and discuss their relevance to sustainability science
2. analyze strengths and weaknesses in causal, teleological, systems analytical and other types of explanations
3. identify research ethical problems and show an understanding of the possibilities and limitations of science and why the credibility of science should be maintained
4. identify, classify, compare and critically review quantitative and qualitative research methods
5. describe and explain central concepts in statistics and experimental methodology
6. use descriptive and inferential statistical methods and present their results.

**Course content**

The course contains an overview of science theory, research ethics as well as quantitative and qualitative research methods. The student is given knowledge, skills and abilities in analyzing, evaluating and positioning scientific methods. The course also gives the students

an overview of the experimental methodology, the survey methodology and the concepts and basics of descriptive and inferential statistics.

<b>Teaching</b>	Lectures and seminars
<b>Prerequisites</b>	At least 180 credits first-cycle degree comprising at least 60 credits in sustainability science, environmental engineering, technology, psychology, industrial design, business administration, natural resource management, leadership, organization and governance, or other relevant main area.  In addition, knowledge of English is required corresponding to what is required basic eligibility for Swedish university education at undergraduate level.
<b>Examination</b>	Written examination
<b>Grade</b>	A, B, C, D, E, Fx, F
<b>Other regulations</b>	Degree Criteria for the final grade will be handed out by course responsible or examiner latest at the beginning of the course.
<b>Sustainable environment</b>	The majority of the course content deals with sustainable development..
<b>Module</b>	0010 Written home assignment 7.5 cr Grade: AF