Visualization for Sustainability

Visualisering för hållbar utveckling
7.5 credits

Single subject course

746A98

Valid from: 2025 Autumn semester

Determined by	**Main field of study**	
Chairman of the Course and Programme Syllabus Board at the Faculty of Arts and Sciences	Environmental Science	
Date determined	**Course level**	**Progressive specialisation**
2025-02-12	Second cycle	A1F
Revised by	**Disciplinary domain**	
	Natural sciences	
Revision date	**Subject group**	
	Environmental Science	
Offered first time	**Offered for the last time**	
Autumn semester 2025		
Department	**Replaced by**	
Institutionen för Tema		

Entry requirements

- 180 ECTS credits passed with 90 ECTS credits in one of the following areas: natural sciences, social sciences, humanities or engineering.
- 15 ECTS credits passed in Environmental Sciences, Sustainable Development or equivalent.
- English corresponding to the level of English in Swedish upper secondary education (Engelska 6 or Engelska nivå 2).
  Exemption from Swedish.

Intended learning outcomes

After completion of the course, the student should be able to:

- describe and apply basic visualization concepts
- critically review and analyze visualization tools and techniques for sustainability communication and decision making
- analyze geospatial data and present results orally and in text
- develop visual representations, with focus on data management, graphic representations and narratives, as well as present results orally and in text

Course content

The course handles basic knowledge in geographic and information visualization and includes collection, handling, and processing of data, as well as development of visual representations for different user groups. The focus of the course is on visualization in the field of sustainable development with emphasis on science communication, decision support and analytical tools. The course specifically discusses representation and analysis of sustainability aspects including linkages in-between aspects, visual communication, and the role of visualization for planning and decision support

Teaching and working methods

Teaching and workings methods include lectures, seminars, laboratory activities, and individual written assignments. In addition, students undertake self-studies.

Examination language: English

Examination

The course is examined through:

- individual written assignments, grading scale: EC
- active participation in seminars and laboratory activities, grading scale: EC (P/F)
- oral presentation of final assignment, grading scale: EC (P/F)

For a final passing grade (E) on the course, at least a Pass is required for all compulsory components. Higher final grades will be based on the individual written assignments.

Detailed information on the examinations can be found in the course handbook.

If special circumstances prevail, and if it is possible with consideration of the nature of the compulsory component, the examiner may decide to replace the compulsory component with another equivalent component.

If the LiU coordinator for students with disabilities has granted a student the right to an adapted examination for a written examination in an examination hall, the student has the right to it.

If the coordinator has recommended for the student an adapted examination or alternative form of examination, the examiner may grant this if the examiner assesses that it is possible, based on consideration of the course objectives.

An examiner may also decide that an adapted examination or alternative form of examination if the examiner assessed that special circumstances prevail, and the examiner assesses that it is possible while maintaining the objectives of the course.

Students failing an exam covering either the entire course or part of the course twice are entitled to have a new examiner appointed for the reexamination.

Students who have passed an examination may not retake it in order to improve their grades.

Grades

ECTS, EC

Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus.

The course is conducted in such a way that there are equal opportunities with regard to sex, transgender identity or expression, ethnicity, religion or other belief, disability, sexual orientation and age.

If special circumstances prevail, the vice-chancellor may in a special decision specify the preconditions for temporary deviations from this course syllabus, and delegate the right to take such decisions.

About teaching and examination language

The teaching language is presented in the Overview tab for each course. The examination language relates to the teaching language as follows:

- If teaching language is “Swedish”, the course as a whole could be given in Swedish, or partly, or as a whole, in English. Examination language is Swedish, but parts of the examination can be in English.
- If teaching language is “English”, the course as a whole is taught in English. Examination language is English.
- If teaching language is “Swedish/English”, the course as a whole will be taught in English if students without prior knowledge of the Swedish language participate. Examination language is Swedish or English depending on teaching language.