DIT004 Digitalization in a changing world, 7.5 credits
Digitalisering i en föränderlig värld, 7,5 högskolepoäng
First Cycle

Confirmation
This course syllabus was confirmed by Department of Computer Science and Engineering on 2022-01-31 to be valid from 2022-01-31, spring semester of 2022.

Field of education: Technology 40%, Design 30% and Science 30%
Department: Department of Computer Science and Engineering

Position in the educational system
The award is given at the University of Gothenburg's summer school.

Main field of studies	Specialization
Software Engineering	G1N, First cycle, has only upper-secondary level entry requirements
Computer Science-Software Engineering and Tech	G1N, First cycle, has only upper-secondary level entry requirements

Entry requirements
General entrance requirements.

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

Knowledge and understanding
Students will know and understand the important concepts around sustainability, sustainable development, how technololgy can support humans in shifting towards a sustainable lifestyle, and what risks to be aware of.

Competence and skills
Students will be able to apply business analysis, requirements engineering, design and quality assurance methods that support the integration of sustainability-related values and objectives into IT systems and service development.

Judgement and approach
Students will be able to assess and judge the sustainability of a system under consideration in a specific context with its respective stakeholders using an established analysis framework and derive implications for supporting the envisioned benefits and mitigating potential risks in long-term systemic effects.

The course is sustainability-focused, which means that at least one of the learning outcomes clearly shows that the course content meets at least one of the University of Gothenburg's confirmed sustainability criteria. The content also constitutes the course's main focus.

Course content

Sustainability and sustainable development concepts are discussed in class and contrasted with climate change, world economics, systems thinking, and technological development. This builds the foundation for critically assessing the potential and risks of digitization in a changing world and being able to conceptualize and develop IT systems that support sustainable development. All content is applied to a collaborative team development project.

The purpose is to prepare students as self-aware, responsible agents of change in the world who apply critical thinking and a long-term systemic perspective to the plethora of development opportunities provided by digitization. The course supports SDGs 3 (health & wellbeing), 9 (innovation) and 11 (sustainable communities).

Sub-courses
1. **Project** *(Projekt),* 5 credits
   Grading scale: Pass (G) and Fail (U)

2. **Assignments** *(Inlämningsuppgifter),* 2.5 credits
   Grading scale: Pass (G) and Fail (U)

Form of teaching
Development of and reflection on a personal sustainability practice; flipped classroom for introducing concepts; a team project will be carried out in small teams over the extent of the course, including requirements engineering, design, and prototyping of an IT service or product to explore sustainable development.

Language of instruction: English

Assessment
The assessment is composed of active participation in class, contributions to the design and implementation of the team project, a final presentation thereof, and a written and illustrated report on the project including a documentation of its developments and analysis of its sustainability impacts.

If a student who has twice received a failing grade for the same examination component wishes to change examiner ahead of the next examination session, such a request should be made to the department in writing and should be approved by the department unless there are special reasons to the contrary (Chapter 6 Section 22 of the Higher Education Ordinance). If a student has received a recommendation from the University of Gothenburg for study support for students with disabilities, the examiner may, where it is compatible with the learning outcomes of the course and provided that no unreasonable resources are required, decide to allow the student to sit an adjusted exam or alternative form of assessment.

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, but no more than two years after the course has ceased/been changed. The same applies to internships and professional placements (VFU), although this is restricted to just one additional examination session..

Grades
The grading scale comprises: Pass (G) and Fail (U).
The course is passed if both modules are passed with at least 50%.

Course evaluation
The course is evaluated through meetings both during and after the course between teachers and student representatives. Further, an anonymous questionnaire is used to ensure written information. The outcome of the evaluations serves to improve the course by indication which parts could be added, improved, changed or removed.

Additional information

For course literature please se appendix.