

SGR016F, Sustainability Science: Foundations, concepts, methodologies, 7.5 credits, third cycle

The course was established by LUCSUS at Lund University and the syllabus was approved by The LUCSUS Board on 25 January 2024.

The syllabus is valid from the spring semester 2023.

### A. General information

The course is third-cycle course offered at the Centre for Sustainability Studies (LUCSUS).

The language of instruction is English.

### B. Learning outcomes

On completion of the course, the doctoral student is to have acquired the following knowledge and skills:

#### *Knowledge and Understanding*

- demonstrate in depth and up-to-date knowledge on the foundations of sustainability science
- display specialized knowledge about sustainability science, including the interaction between broader sustainability challenges and more specific cases, especially as they pertain to the student's PhD research area.
- demonstrate an understanding of relevant research methodologies and analytical frameworks in sustainability science.

#### *Competence and Skills*

- demonstrate a capacity for scholarly analysis and synthesis of the field, and the ability to review and discuss phenomena, issues and situations in written form
- exhibit the ability to identify and formulate issues with scholarly precision, critically, autonomously and creatively, and undertake a quality analysis and other advanced tasks in predetermined time frames
- demonstrate the ability to discuss ideas in the field of sustainability science, and in dialogue with other relevant disciplines

#### *Judgement and Approach*

- demonstrate the ability to integrate different scientific perspectives that contribute to a more profound understanding of specific sustainability challenges
- demonstrate reflective awareness of how the participant's work is situated within the realm of sustainability.

### C. Course content

Tackling the world's toughest sustainability challenges requires robust knowledge, interdisciplinary methodologies, and strong collaborative efforts. This PhD course focuses on the emerging research field of sustainability science, and its strong intentions to stimulate knowledge and learning on concepts, attitudes, and methodologies to contribute to inclusive sustainable societal change. More specifically, the aim is for participants to develop a more comprehensive understanding of the development of the field, including different perspectives (e.g., resilience, sustainability transitions, governance of sustainability, political economy, political ecology, and social movements) and specific approaches (e.g. methods of critique, extended cases study, ethnographic interviews, quantitative analytical tools and methods, visioning and imaginaries) often used in the field.

### D. Course design

Focus on the course learning activities will consist of a mix of readings, interactive seminars & lectures and presentations, and include the following areas:

Block 1: Knowledge, context and concepts

#### *1. Mainstream sustainability perspectives/analytical frameworks*

- Field evolution (lead-up, foci in early years to today's approaches)
- Multi, Inter & Transdisciplinarity
- Social-ecological systems
- Social-technological systems
- Governance of sustainability

#### *2. Complementary & critical perspectives in the field*

- Political ecology (power critical)
- Political economy (growth critical)
- Transformational aspects: social mobilizations and change

- Approaching wicked problems through a logic of retroduction

#### Block 2: Methodologies for sustainability research

- Quantitative/analytical: patterns, flows, networks
- Qualitative/analytical: extended case study, interviews, inequality, gender, participation
- Anticipation: visioning, scenarios, imaginaries
- Comparatives and synthesis of knowledge systems: generalities and synthesis

#### **E. Assessment**

Active participation in class seminars/discussions (25%) with mandatory attendance at the seminars and panel discussions (makeup assignments possible for up to 2 missed sessions).

A written submission (75%) in the form of a paper situating the student's PhD research in the broader sustainability science perspective(s) and methods (e.g. a draft of Kappa's introduction)

#### **F. Grades**

The grades awarded are Pass or Fail. To be awarded a grade of Pass, doctoral student students must have attained the learning outcomes stated for the course.

At the start of the course doctoral students are informed about the learning outcomes stated in the syllabus and about the grading scale and how it is applied in the course.

#### **G. Admission requirements and selection priority**

To be admitted to the course, students must be admitted to third cycle studies. The course will be limited to **15** participants.

Course participant selection will proceed in the following order:

1. LUCSUS doctoral students
2. Doctoral students from the Faculty of Social Sciences
3. Lund University doctoral students (performing sustainability-relevant research)
4. Doctoral students from other universities doing sustainability-relevant research