SGO3200 – ~~Innovation in~~ Sustainability Transitions ~~and Transformations~~, Innovation and Social Change

~~To move towards a sustainable future,~~ Societies must transform to reduce their dependence on carbon-based energy sources and protect the environment. Such transitions must be just to reduce social and geographical inequality on both national and global levels. Sustainability transition studies have emerged as a both relevant and influential approach to study ongoing social, technological and institutional change towards a more sustainable future. Research based knowledge inform ongoing debates on how to scale up necessary sustainable transitions. This includes key sectors responsible for most of the global CO2 emissions; energy, transportation, food and construction. Innovation is a key element in transition studies. ~~new types of innovation are called for – innovations that address the "grand challenges" while also taking into account the environmental and social consequences of new innovations. Can we innovate our way to a diverse, low-carbon, green society? This course will explore the relationship between innovation and the environment, including the potential to move toward a "green economy". The role of both technological~~Profit oriented and social innovations in response to problems such as climate change, biodiversity loss, and land use change will be critically assessed. How innovations and transitions are embedded in larger processes of social and geographical change are discussed.

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The **first module** outlines the need for deep seated sustainability transitions in a context of accelerating global climate and environmental change. Theories on sustainability transitions and innovation are presented. A distinction between traditional, social and sustainable innovations is introduced. The Multi-Level-Perspective, which analysis how niche innovations sometimes scale up and transforms larger sectors in the economy, is presented together with perspectives on power and geography.

The **second module** discusses the role of wind energy in sustainability
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The **third module** discusses the role of solar energy. According to the UN-IPCC, the replacement of fossil fuels by solar energy is the single most important measure to reduce global CO2 emissions. There are however huge differences at the country level in how far this replacement have come. Current institutional and policy potentials and barriers in the Global South and North towards a further upscaling of solar energy are discussed

The **fourth module** presents and discusses the role of a more circular economy as part of sustainability transitions. A circular economy implies reduction, reuse and recycling of natural resources including metals, minerals, food and wood. Policy actors such as the EU have ambitious goals for a circular economy, but institutional inertia seems to hinder a fast uptake of circular practices on the ground. Such inertia is discussed together with potentials.

Learning outcome

Knowledge

- A critical understanding of concepts and theories related to sustainability transitions, innovation, social and geographical change
- An understanding of new drivers of sustainability transitions in the context of global environmental challenges
- Recognition of the features and characteristics of both technological, social and sustainable innovation
- A critical understanding of the challenges and opportunities
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Skills and Competencies

- Ability to discuss diverse approaches to sustainability transitions
- Critical understandings of examples of contemporary innovation
- Capacity to carry out an in-depth case study
- Skills in presenting, critiquing and discussing research on sustainability transitions

Teaching

The course consists of 3-hour teaching sessions
that combine lectures and group work. The first hour consists of
a lecture presenting parts of the literature. T
he second hour consists of group
discussion on the topic of the lecture and module.
In the last part of the session, students will work

in small groups on specific assignments to be submitted on Canvas. The assignments are commented and approved by the lecturer. Students need to have three assignments approved to take the exam. It is recommended that you work in groups of 3-5 students and that you take active part in all teaching sessions and assignments.

Compulsory activities

- You must complete three course assignments approved by the lecturer in order to take the exam.

It is not possible to take the final exam without meeting the compulsory course requirements.

Completed and approved compulsory course work is valid for 3 years.

Access to teaching

A student who has completed compulsory instruction and coursework and has had these approved, is not entitled to repeat that instruction and coursework. A student who has been admitted to a course, but who has not completed compulsory instruction and coursework or had these approved, is entitled to repeat that instruction and coursework, depending on available capacity.

Examination

A 6-hour written school exam.

Previous exams

Field Code Changed

Examination support material

Students may use dictionaries at this exam. Dictionaries must be handed in before the examination. Please read regulations for dictionaries permitted at the examination.

Field Code Changed

Language of examination

The examination text is given in English.You may submit your response in Norwegian, Swedish, Danish or English.