Course Descriptions None 2024-2025

Course Title	Sustainability Science
Course Code	SSP2031
ECTS Credits	5,0
Assessment	Whole/Half Grades

Period

Period	Start	End	Mon	Tue	Wed	Thu	Fri
1	2-9-2024	20-10-2024			X		X

Level	Introductory/Intermediate
Coordinator	Ron Cörvers, Jacob Moody For more information:r.corvers@maastrichtuniversity.nl; jacob.moody@maastrichtuniversity.nl
Language of instruction	English

Goals	* Students recognise, analyse, and explain social, ethical, and normative aspects of sustainability science for policy, business, and society (social complexity, multiple actors, fact-value distinction, worldviews, framing, decision-making)
	* Students recognise, analyse, and explain theories and concepts of sustainability science (social-environmental system, post-normal science, integrated analysis, transdisciplinary approach, problem-driven science, linking knowledge to action)
	* Students recognise, analyse and explain the relationships between science and society (linear model of science, uncertainty, different types of knowledge, salience, credibility, and legitimacy of knowledge, problem types, problem structuring, boundary work, boundary objects, boundary organisation), and the roles scientists can play in these relationships when dealing with sustainability problems in different contexts (pure scientist, (stealth) issue advocate, science arbiter, honest broker)
	* Students apply the following to a case study:
	    * theories and concepts of sustainability science
	    * social, ethical, and normative aspects of sustainability science
	    * the relationships between science and society and the roles scientists can play in these relationships when dealing with sustainability problems in different contexts

Description	In the 1990s, sustainability science emerged as a new field of knowledge. Today it can be considered both a discipline and an interdisciplinary framework. Sustainability science aims to generate useful knowledge about sustainability problems through problem-driven approaches, attention to cross-scale dimensions of human-environment interactions, integrated analysis, and 'crossing boundaries' between disciplines and societal domains. This course investigates the field of sustainability science and, in particular, addresses the role of (scientific) knowledge and scientists at the interface of science, policy, business, and society. Policymaking and scientific knowledge are entangled in many ways when pursuing sustainable development. Policymakers, for instance, want to use scientific knowledge to justify their policies and regulations. Likewise, scientists hope their findings about sustainability problems are useful to policymakers and society. In this course, we will investigate how sustainability science, policy, business, and society are intertwined or clash. Starting from the angle of policymaking, we will look into the nature of policy problems, which, in the case of sustainable development, often are ill-structured and open-ended. From the angle of science, we will consider the different roles scientists can play as knowledge providers and under which conditions knowledge is meaningful to others. Attention will also be given to how the science 'system' changes, particularly the shift from 'normal' to post-normal science and transdisciplinary collaboration. This raises pertinent questions about what sustainability knowledge is in the first place and its role in solving sustainability problems. We will see that different types of problems require different types of problem-solving approaches. Only 'structured problems' can be tackled through calculation and command-and-control, while sustainability problems are often 'unstructured'. Moreover, different types of knowledge might be necessary for solving a sustainability problem. Understanding sustainability problems through the lenses of worldviews and problem structuring will be discussed. Knowledge integration from various scientific and societal bodies of knowledge is challenging, but if done successfully, it is more than the sum of its parts. For this purpose, sustainability scientists are 'crossing boundaries' between different disciplines and societal domains, for which transdisciplinary collaboration provides a useful approach. A topical and controversial sustainability issue will be central to this course. It will act as a case study to which theories, concepts, approaches, and methods of sustainability science will be linked. This course will help students appreciate that sustainability science is driven by uncertainty, does not speak with one mouth, does not compel action, and that knowledge and values are intertwined. In paying attention to knowledge integration, crossing boundaries, and transdisciplinary work, the course prepares students for later work as sustainability professionals within government, business, science, or intermediary organisations.
Literature	
Prerequisites	Exchange students should refer to the International Relations Office via email in case they would like to register for this course: iro-incoming-sbe@maastrichtuniversity.nl. Only limited spots available, first-come first-serve principle.
Keywords	
Teaching methods	PBL / Lecture / Assignment / Groupwork
Assessment methods	Written Exam / Assignment
Evaluation in previous academic year	For the complete evaluation of this course please click http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM

This course belongs to the following programme / specialisation

Master Sustainability Science, Policy and Society - Business for Sustainability	Compulsory Course(s)
Master Sustainability Science, Policy and Society - Policy for Sustainability	Compulsory Course(s)
SBE Exchange Master	Master Exchange Courses