Sustainable Technology in Society elective package

Sustainable Technology in Society (This flyer will be updated soon)	
Offered by	Department of Industrial Engineering and Innovation Science
Language	English
Primarily interesting for	All students, but most relevant for students with background in Majors Psychology and Technology, Built Environment, Industrial Design and industrial Engineering Not allowed for Major Sustainable Innovation
Prerequisites	Required courses: - Recommended courses: -
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Content and composition

We live in a technological world. In our everyday life we use technologies all the time when we cook, shower, communicate and travel. Businesses cannot operate without technologies. Governments are also much concerned with technologies and innovation, e.g. as a problem solver for sustainability challenges, as engines of economic growth or as potential sources of major risks.

In this package you develop a deep understanding of the interrelationship between technologies and their social and economic context. Challenging and enlightening cases are discussed, in particular from the field of sustainable innovation. Different perspectives from the field of Sustainability Transitions and Science and Technology Studies (STS) are offered to understand and govern these cases and relationships. These include among others large technical systems theory, actor-network theory, social construction of technology, sociotechnical scenario's, strategic niche management and the multi-level perspective.

After successfully finishing the three courses in this package you will be able to value the complex relationships between technology and society and have gained important knowledge and skills for socio-technical management and governance. For further deepening their knowledge and skills, students can participate in an additional fourth course 'Sustainable Technology in Society: Advanced'.

Course code	Course name	Level classification
0SV10	Sustainable Technology in Society: Introduction	-
0SV40	Managing Sustainable Technology	-
0SV50	Managing Sustainable Technology OGO	-

Course description

Sustainable Technology in Society: Introduction (0SV10)
This course introduces students to the inter-weaving of technology and society and the challenges this brings to sustainable innovation. The course focuses on a set of compelling and captivating cases to create student awareness of the intertwinement of sustainable innovation with social, political and ethical issues (basic introduction to the discipline of Science and Technology Studies - STS) and the holistic study of innovation as a sociotechnical process in a specific time, place, and stakeholder setting.

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Managing Sustainable Technology (0SV40)
This course builds upon the cases and perspectives offered in the previous course but focusses on ways to manage complex relations between technology and society. Managing Sustainable Technology introduces students to the possibilities and limitations of how societies can manage sustainable innovations, drawing on insights from the field of Sustainability Transitions (ST) and Science and Technology Studies (STS). Given the limitations of product and process innovations in dealing with grand societal challenges such as climate change, poverty or social inequalities, this course focuses on innovation from a system perspective. During the course students will discuss a number of reflexive approaches to manage complex technological change from a systemic perspective. The approaches will be applied to simple practical cases and reflected upon using critical thinking skills.

Managing Sustainable Technology OGO (0SV50)
During the Managing Sustainable Technology OGO students learn to practically operationalize insights and tools from the field of Science and Technology Studies and apply these on a "real life" sustainable innovation case, e.g., in energy, ICT or mobility. The aim is to study how technology is/can be managed in society and design policy or strategy recommendations based on their analysis. A combination of knowledge application and a theoretically informed reflection forms the core of this OGO.