



scAIInce - Metaverse Platform

Sustainable Design

Teachers: Prof. Dietrich Schwarz and Dipl.-Ing. Wolfgang Simma Wallinger

Module type Individual Elective
ECTS selectable 4-3-2 ECTS
Taught units per semester (in units of 45 minutes) 8-6-4
Private study time (in hours) 114.0, 85.5, 57.0 Min. Frequency Twice a year
Language English Assessment: Minimum 75% compulsory attendance, regular meetings with instructors, continuous assessment, portfolio and final review. The final grade is calculated according to the weighting of the following components: final submission (80%) and oral presentation (20%).

Contact:
Wolfgang Simma-Wallinger
Wolfgang.Simma@uni.li

This Independent Studies module explores how technological innovation, particularly Artificial Intelligence (AI) and immersive Metaverse platforms can support sustainable transformation. It is part of the interdisciplinary research initiative scAIInce, conducted in collaboration with the Institute of Transport Planning and Traffic Engineering (IVV) at the Technical University of Darmstadt and embedded within the Sustainable Design Unit.

The central research questions are: Can technological change lead to a more sustainable life in our cities? and How and why is Artificial Intelligence transforming urban systems? Students will develop and implement experimental, participatory research formats such as virtual e-town halls and serious games in the Metaverse to investigate public attitudes toward AI-supported approaches to achieving the UN Sustainable Development Goals (SDGs).

A core task of this module is to actively connect stakeholders from municipalities in Liechtenstein, academic partners, and civil society actors. Students will organize and facilitate participatory events in immersive virtual spaces, engage directly with citizens and local decision-makers, and help build a research-driven network. They will also moderate digital sessions, collect and analyze qualitative and quantitative data, and reflect on the ethical and practical implications of AI for urban sustainability.

Through this project, students will gain hands-on experience in interdisciplinary research, digital participation formats, stakeholder engagement, and scientific communication. The module offers a unique opportunity to contribute to cutting-edge debates on AI, digital transformation, and the future of sustainable areas.