HSLU | Hochschule Luzern

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Training IT experts in sustainable digital transformation at the Lucerne University of Applied Sciences and Arts.

The Lucerne University of Applied Sciences and Arts launches a new master's programme entitled "IT, Digitalization and Sustainability". This programme is unique in Switzerland and places the HSLU in an ideal position to address the increasing demand for IT professionals with the skills to bring together digital transformation and sustainability.

How can the IT industry advance sustainable development? This question is central to the new master's programme "IT, Digitalization and Sustainability" (ITDS) of the Lucerne University of Applied Sciences and Arts. The ITDS programme will be launched in the 2022 autumn semester and delivered by the HSLU's School of Computer Science and Information Technology.

"Sustainable development and digital transformation are terms that rarely go together in the public imagination, even though they are closely intertwined" says head of programme Peter Wullschleger. He points out that the new MSc programme addresses this very issue while simultaneously reacting to the economy's increasing demand for IT professionals that specialise in sustainable digitalisation.

Peter Wullschleger explains that ecology is just one of several dimensions to which the concept of sustainability can be applied. "Our curriculum aligns with the UN's 17 Sustainable Development Goals (SDGs); they form our thematic framework. This means that, in addition to an intact environment, we also consider issues such as social justice and economic development."

The head of programme cites a few examples of how information technologies can be used to advance the UN's Sustainable Development Goals:
  – Corruption is a major obstacle on the path to reaching the "Peace, Justice and Strong Institutions" sustainable development goal. Artificial intelligence can help to fight corruption by detecting illegal payments.
  – Coffee farmers in the southern hemisphere seldom benefit from producing their crop while its sale in the northern hemisphere is lucrative for others. Digital certificates based on NFT technology could be used to ensure that coffee is produced in compliance with environmental and social standards ("No Poverty" and "Life on Land").
  – Apps for the reduction of food waste: there might be apps for restaurants and markets providing information on locally donated surplus food, helping to reach the "No Hunger" and "Responsible Consumption and Production" goals.

Programme with a highly international orientation
The first half of the two-year master's programme is organised around five central subject areas: Intercultural Collaboration, Project Management and Leadership, Digital Transformation, Natural Language Processing and Information Systems, and Artificial Intelligence and Machine Learning, all closely linked to the UN Sustainable Development Goals.

The Master's in ITDS has an international orientation. The language of instruction is English. "Finding solutions for the complex issues around sustainability often requires international cooperation," says Peter

Wullschleger. For this, he asserts, we need intercultural, project management and leadership skills, all of which are as important in the programme as developing the students' technical skills.

Cooperation agreements with various partner universities abroad play a key role in this context. In the second half of the programme, students attend a compulsory semester abroad. They can also pursue a dual/double degree and, after graduation, a PhD.

Profile, Master of Science in IT, Digitalization and Sustainability
Programme start: Mid-September 2022
Information event: 8 March 2022, Campus Zug-Rotkreuz
Find out more at hslu.ch/master-itds

Who is this new degree programme for?
The Master of Science in IT, Digitalization and Sustainability is primarily for candidates who hold a bachelor's degree in Computer Science and Information Technology, International IT Management, Business Information Technology or Engineering. Admission requirements are a grade point average of 5.0, skills in programming, mathematics and statistics, English language skills at C1 (advanced) level, as well as a demonstrable interest in, and enjoyment of, the programme's interdisciplinary content and of new technologies.

What are the career prospects for graduates?
Graduates' career prospects and potential fields of activity are extremely varied. Among many other career paths, they include:
- Spearheading the sustainable digital transformation of a municipal or cantonal administration as Chief Digital Officer.
- Managing complex IT projects for international organisations in an intercultural environment.
- Helping to transform international value chains of large corporations towards environmental and social sustainability by using information technologies.

Moreover, entirely new fields of activity are expected to emerge thanks to the increasing importance of disruptive technologies and sustainable development.

Contact for media representatives:
Lucerne School of Computer Science and Information Technology
Peter H. Wullschleger, Head of MSc Programme in IT, Digitalization & Sustainability
T +41 41 757 68 03/ peter.wullschleger@hslu.ch

Lucerne School of Computer Science and Information Technology
Nina Blättler, Deputy Head of Programme and Lecturer
T +41 78 405 63 05/ nina.blaettler@hslu.ch