

# Approaching sustainability in diverse ways in Tampere University

EUA Learning & Teaching forum - Embedding and facilitating sustainability 18.2.2021

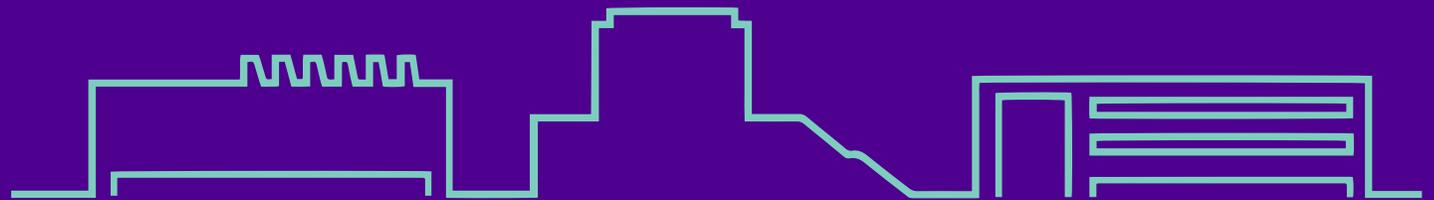
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# The University of Tampere and Tampere University of Technology were merged to create the new foundation-based Tampere University on 1 January 2019.



We are spread across three campuses in Tampere...



City centre campus

Hervanta campus

Kauppi campus

...and have a presence at the university consortia  
in Pori and Seinäjoki.

# Tampere University

## We have seven faculties

- Faculty of Built Environment
- Faculty of Education and Culture
- Faculty of Engineering and Natural Sciences
- Faculty of Information Technology and Communication Sciences
- Faculty of Management and Business
- Faculty of Medicine and Health Technology
- Faculty of Social Sciences

Our staff

**3,450**

2,106 academic  
1,344 support

Our students

**18,400** BSc & MSc  
**2,500** PhD

19 %  
international  
academics

We are the second largest  
university in Finland.

## Tampere University's strategy 2030

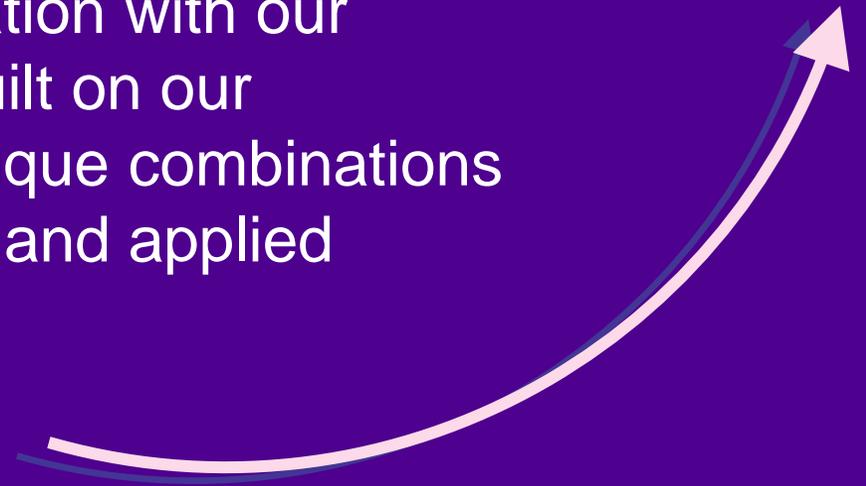
# We work together to build a sustainable world

We develop solutions to tackle climate change, preserve the natural environment and improve the well-being and sustainability of societies.



The new multidisciplinary Tampere University brings together research and education focusing on technology, health and society.

Our collaboration with our partners is built on our strengths, unique combinations of disciplines and applied expertise.



# Degree programmes built around sustainability

- **Bachelor's Degree Programme in Sustainable Urban Development**
  - a multidisciplinary programme developing skills needed to address the challenges related to the environment and wellbeing of individuals
  - a unique aspect of this programme is the style of learning: each year the students are engaged in real-life urban development projects, which are carried out in collaboration with companies and public organizations
- **Master's Degree Programme in Sustainable Digital Life**
  - aims to make the digital life more sustainable and accessible for all by cherishing diversity and combining critical thinking with a creative mindset
  - focuses especially on the study of the long- term structural change in digital and social systems with the aim of maintaining social cohesion and solidarity while acknowledging the need to reduce environmental and resource consumption to a sustainable level

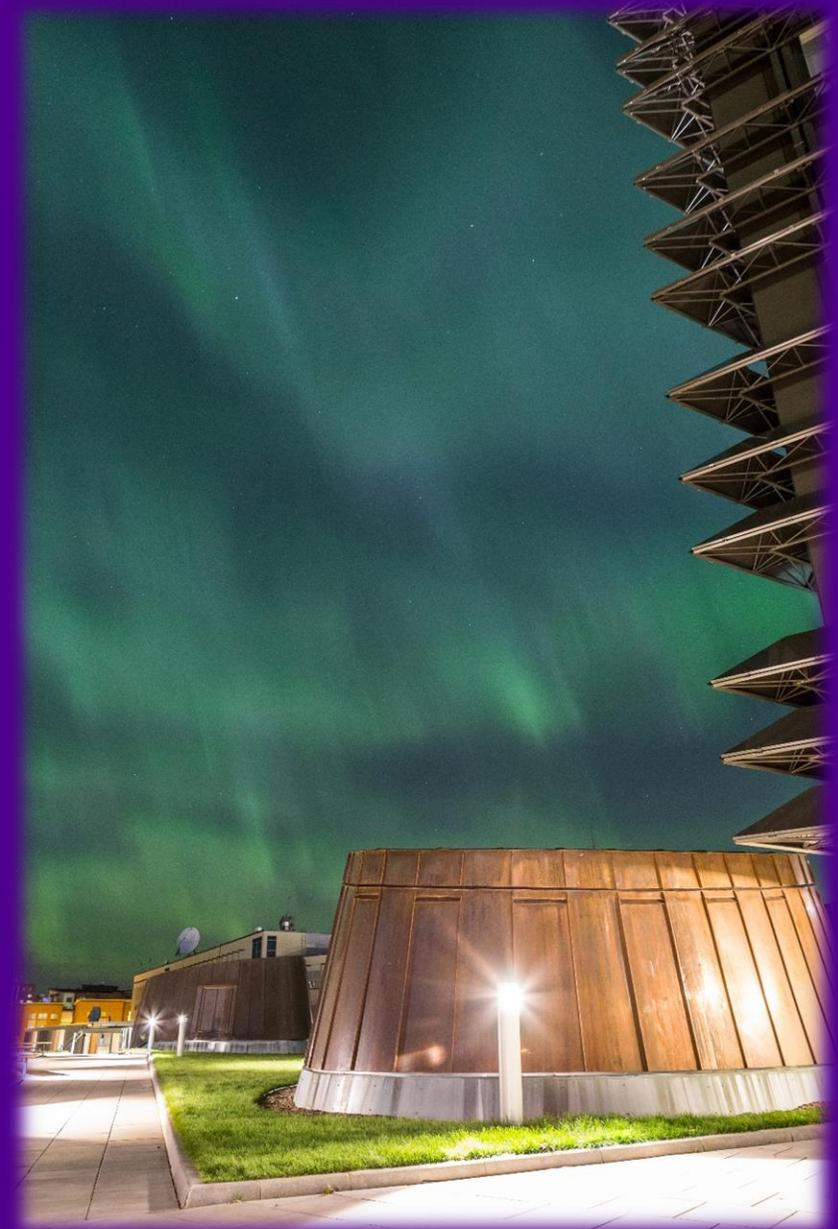


# Integrating sustainability on the learning outcomes of all degree programmes

- In Tampere University Community we have common learning outcomes i.e. competencies that every student graduating should master
- International outlook and global responsibility, upon graduation the students should e.g.
  - identify local and global issues related to sustainable development and their interrelationships within the ecological, socio-cultural and economic dimensions of sustainable development
  - orient him/herself to the future by identifying the consequences that decisions and choices have for sustainable development and be familiar with sustainable development issues and ways of forming knowledge about sustainable development in his/her scientific or other field



# Promoting sustainability through teaching methods



Ongoing

## Innovation Challenges

Credits: 5

ONLINE

22.10. - 10.12.2020



**1. Reumaliitto** is a Finnish association offering activities, knowledge, peer support and networks for people with rheumatism and musculoskeletal disorders. The association consists of 141 independent member organisations.

Reumaliitto is challenging the students with this challenge:

To find, understand and propose a concept for a digital platform for the patients with rheumatism and musculoskeletal disorders for networking and peer support.

**2. Rematch** is a company in the circular economy field. The company's purpose is to recycle used gaming equipment by buying, repairing if necessary, and selling the devices to a new happy owner.

Rematch is challenging the student teams with this challenge:

To understand, find and propose a new service model to find sales-willing customers with old gaming equipment, to buy, repair and sell them to the new owner.

**3. Kehitysvammatuki 57 Ry** is a non-governmental organization for people with intellectual and developmental disabilities and for their families. The organization organizes different kind of events, clubs and activities for the clients to participate. The COVID situation has made the participation difficult for the clients who are unable to communicate alone from home through digital devices.

Kehitysvammatuki 57 Ry wants to challenge the student team to:

Find, understand, and propose a method to enable participation to the activities for clients who are unable to use the communicative devices alone. This could include guiding the nursing staff and activating other clients who are more independent, for example.

**4. Cireco** is one of Finland's leading company in the circular economy field. The company's goal is to improve the quality and value of products and materials created under the principles of circular economy. There is a growing demand for circular economy solutions on the market and these solutions play an important role in achieving EU, national, and regional climate goals.

Cireco is challenging the student teams in with these challenges:

A: To understand, find and propose what kind of ecosystems can be connected around different circular economy themes? This could include individuals, companies, schools, organizations etc.

# SPRINT

INNO  
VATION  
FESTI  
VAL

1. RARE Media

## Impactful media business for the better future

How could companies do sustainable and impactful business by new revenue logic? RARE challenges you to develop new sustainable revenue...



9. Natalia Kallio, Human right activist

## How to reduce inequality?

Inequality is global but also national problem. Inequality appears in multiple dimensions in our society. We can see it in...



12. City of Tampere

## Sustainable consuming

Background: Recycling and utilisation of materials promote circular economy, that seeks to create economic value from a smaller amount of...



14. MTK

## Pump up the biogas!

Our climate can't handle the current situation in the world anymore. We must come up with new resources and procedures...



15. City of Tampere

## Sustainable mobility

Background: The emission of traffic in Tampere are mainly caused by road traffic. The residents of Tampere make about half...



# Flipped learning

- Since autumn 2019, the Flipped Learning method has been piloted in the technical degree programs of our university
- The results indicate that flipped learning model effects students' interest towards the subject and develops their time and resource management abilities
- The results also imply that the flipped learning method was able to support students' quality of learning better than the traditional learning method, both before and during the COVID-19 outbreak
  - this suggests that flipped learning methods have potential in preparing students to sudden and unexpected changes that face the education system and the whole society
  - This may be due to working in the same group throughout the academic year that produced an experience of togetherness and caring for others, which carried over the spring lock down time when there was no opportunity for encountering
  - In addition, the small group meetings included in the method became very important for students as routines that maintain both the study rhythm and the experiences of belonging to the group

Nokelainen, P., Puhakka, I., Vuorenpää, V., Rämö, J., Viro, E., Kaarakka, T., Kangaslampi, R., Hirvonen, J., & Ali-Löytty, S. "Longitudinal study of the development of higher education students' basic psychological needs satisfaction during traditional and flipped learning engineering mathematics courses". Submitted to *Frontiers in Psychology*.





# Challenges encountered on the way

- How to integrate generic skills e.g. global responsibility into degrees that are already very full?
- What kind of new skills teachers need to be able to integrate sustainability issues into their teaching?
- How to get everyone on board with the change?