

## **E-Medicine Centre (eMedLab) at Tallinn University of Technology**

### **Partner 5**

**7 October 2020**

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**ERASMUS + Capacity building project Knowledge Triangle, Innovation: Reinforcing of Education- Research E-Health & Medical Links, ICU 609506-EPP-1-2019-1-SE-EPPKA2-CBHE-JP has been introduced to the Estonian Science Foundation ETIS**



We are waiting all partners in the project to get info about Estonia, Estonian research and newest developments related to medicine:

<https://www.taltech.ee/en/emed-lab#p18806>

with Health Care Technology MSc programme is the largest e-health research and education centre in Estonia. The research centre is focused on developing IT solutions related to the digitalisation of health care (e-health) and studying the interoperability factors necessary for its implementation. These factors include strategies, standards, IT architecture, data statuses and databases used for large (national or regional) e-health systems. The team at the e-Medicine Centre includes several top specialists and researchers with leading e-health and e-government expertise. The research centre is responsible for the Health Care Technology master's and PhD programmes at the university, and for numerous innovation projects and training programmes with partner organizations in Estonia and abroad. The e-Medicine Centre's personnel played a central role in the design and implementation of Estonia's nation-wide Health Information Exchange platform that opened up new dimensions in the research of shared databases and modern digital workflows in health care environments.

<https://www.taltech.ee/en/hct#p1844>

Health Care Technology (HCT) is a unique Master's programme in Europe that provides interdisciplinary knowledge on digital technologies, innovation and change management of health care. It relies on the best practices of health care digital transformation and e-health innovations from Estonian e-health system and international successes. During the studies, we put a lot of effort in connecting you to different industry partners, digital health companies, government institutions and start-ups.

A high number of our alumni have started work or have interned in digital health companies, IT-companies developing applications and systems in healthcare, in government institutions, in start-ups or in healthcare provider organizations.

Most of the jobs are involved in changing the current processes of health care and digitalising health care delivery for improved quality and access. Many of our alumni are working in or have co-founded digital health start-ups. This shows the need for innovation and new technologies in healthcare.

## **CURRICULUM OUTLINE (120 ECTS)**

- **General studies** - cover courses on medical law and ethics, entrepreneurship and business planning, and research design. The students will also take part in a project-based master's seminar in which they must work in teams to develop innovative solutions to current health care problems.
- **Core studies** - include basics of e-health, health policy and health promotion, and human anatomy and diseases.
- **Special studies** - consist of specialisation courses in Digital Health Technologies that cover healthcare data systems and analysis, medical imaging and signals, interoperability and quality management in healthcare, epidemiology, evaluation and financing in healthcare. The studies also include an internship in cooperation with the industry partners.
- **Free choice courses** - students can choose from a wide variety of courses offered by the university.
- **Graduation thesis** - students are asked to write a research paper or a scientific article, in which they must apply their knowledge on healthcare digitalisation through various perspectives.

Our university latest developments :

**TalTech's PhD thesis offers a real-time alternative to dialysis quality monitoring by an optical method**



The primary function of kidneys is to filter blood, removing waste products that build up in a human body. If kidneys are damaged and their function fails, an excessive amount of water and waste products accumulates in the blood and the body. If waste products are not removed from the body in time (by dialysis), the waste products can become toxic to the human body, which can lead to weakness and nausea and, in extreme cases, be fatal.

Another institution at TalTech, Innovation Centre Mektory ,  
<https://www.taltech.ee/en/mektory>

has been informed at their contact meeting point about the new project started in 2020.

TalTech Mektory offers:

- **For companies:** We unite scientists and students with entrepreneurs in order to generate new ideas and to solve practical problems in product development.
- **For students:** We help faculties and scientists with funding for their research and business know-how.
- **For young entrepreneurs:** We support student start-up companies during their pre-incubation period by holding workshops and competitions.
- **For children:** We address the upcoming generation and show engineering as exciting, feasible and down to earth.

**ERASMUS+ Capacity Building project, 609506-EPP-1-2019-1-SE-EPPKA2-CBHE-JP  
with**

**Egypt and Lebanon universities started at Law Department, TalTech.**

The main aim of the 3-year project is strengthening of relations between HEIs and the wider economic and social environment.

Collaboration between universities and industries is critical for skills development, the generation, acquisition and adoption of knowledge and the promotion of entrepreneurship. Through collaborative interchange, the university becomes “a more vigorous partner in the search for answers”. The social and economic community provides a context for civic

discourse and the reciprocal, interactional creation of knowledge. Community engaged education establishes the context for the exploration of pressing and complex problems, of which e-health and medical informatics is an example. Out of this reciprocal need comes the development of a model for interdisciplinary education that centers community as the context for learning. This model represents the theoretical and physical space where the university joins with others to address complex issues. Thus, the main objectives of this project are:

To establish and sustain effective Industry cooperating with University (ICU) Centers of e-health Innovations at some collaborate universities in Lebanon and Egypt

To develop a web platform based on Knowledge Triangle, innovation approach and commercialized e- Health innovative technologies and tools

ETIS, <https://www.etis.ee/Portal/News/Index?isLandingPage=False&lang=ENG>

is a one of the best case demonstration of science platform used in Estonia.

Please contact Melita Sogomonjan, [melita.sogomonjan@tatech.ee](mailto:melita.sogomonjan@tatech.ee)

[https://www.etis.ee/CV/Melita\\_Sogomonjan/est](https://www.etis.ee/CV/Melita_Sogomonjan/est) for further questions and information

and also

Katrin Merike Nyman: [https://www.etis.ee/CV/Katrin\\_Nyman%20Metcalf/est?lang=ENG](https://www.etis.ee/CV/Katrin_Nyman%20Metcalf/est?lang=ENG)

Questions and info related to e-learning mainly.

We welcome your interest and questions!

Madli Krispin

Projects coordinator

Department of Law

*Ehitajate tee 5, 19086 Tallinn*

*Phone +3725141224, +3726203502*

[madli.krispin@TalTech.ee](mailto:madli.krispin@TalTech.ee)

<http://www.ttu.ee/en/>

The logo for TAL TECH, with 'TAL' in a larger, bold, pink font above 'TECH' in a smaller, bold, pink font.

*EU/Erasmus+ Capacity building project 609506-EPP-1-2019-1-SE-EPPKA2-CBHE-JP ICU\_RERE, E-Health*