

Interested in Medical Technology? Get a Master's degree!

INTRODUCTION

You have probably heard that medical technology is a strong and fast growing field of technology in Finland. It has shown steady growth even during the recessions. There are large international companies leading the way and an ecosystem of around 400 startups enabling new growth in this field. Employment opportunities are bright and future looks promising.

Medical technology has special requirements compared to other fields developing and utilizing ICT. If you have experience in SW, HW or ICT service development and you are doing or planning to do Research, Development or Innovation in the field of medical technology, you need to know these special requirements and how these are applied in practice.

Now you have a possibility to learn more about medical technology and get a Master's degree! Information Technology Master's Programme in Metropolia University of Applied Sciences offers Medical Technology specialization path. The focus is on regulatory requirements and standards, medical devices and their environments of use, medical device life cycle and innovations processes, and safety related usability. There is a shortage of expertise in this field! Application period is January 5th to 19th in 2022. Studies starts in August 2022.

TO WHOM THIS IS INTENDED

Studies are tailored for professionals working in business, industry and public sector, who want to deepen their knowledge, skills and competences in medical technology to capture new career opportunities for the future. Studies enable novel career prospects for professionals, with previous degree, for example from ICT, health informatics, automation, electronics, electrical engineering and industrial management. The programme suits for professionals already working in the field of medical or health technology or those who are willing to work in this field. A Master's degree is often a prerequisite for management positions. To enter this Master Degree Programme, a Bachelor level engineering degree and at least two years of working life experience are required.

See student story (video): <https://youtu.be/TAqtx0hH8IU>

Medical Technology

Programme: Information Technology

Specialization: Medical Technology

Degree: Master of Engineering

Duration: 1.5 years

Extent: 60 ECTS

Free of charge: Applicants from EU/EEA

Application: January 5th to 19th in 2022

Programme starts August 2022

CONTENT OF THE STUDIES

Medical Technology studies focuses on medical devices, their context of use, and regulation that controls the devices themselves but also business.

EU regulations set strict requirements for medical devices used in European markets. Medical devices may be used in clinical environments by various users, and may come in various forms, e.g. imaging devices, patient monitors, and software or AI supported clinical decision support systems. It is essential that any product classified as a medical device must be suitable for its intended purpose and achieve the performance intended by the manufacturer. Above all, medical devices must be safe to use for the patient and for the professional. As the medical device regulation is EU wide, the Master's degree will open up international work opportunities.

Courses and Master's thesis

The Medical Technology studies extent is 60 ECTS and it consists of courses (30 ECTS) and Master's thesis (30 ECTS). Thesis is half of the degree; it is usually based on a practical problem-solving related to practical work tasks. Metropolia's networks are in your use to help you find a client company for the thesis and a potential future job, if necessary. Course assignments can be focused to serve your practical work or interest in the field of medical technology.

Competence

You will gain a highly valued Master of Engineering Degree after graduation. Essential competences you achieve:

- 1) Understand the requirements set by legislation for manufacturer and other parties involved, and medical device context of clinical use,
- 2) Learn to find and identify unmet medical needs, and formulate compelling need statements based on their value,
- 3) Manage methods and tools used for responding to the requirements of the legislation, defining requirements and developing safe and usable medical devices,
- 4) Generate and screen new medical device concept ideas, and
- 5) Apply learned knowledge and skills in medical devices life cycle in practice.

Implementation

Studying alongside the work is possible. The first study year (autumn - spring) focuses on courses, and planning and conducting Master's thesis. There will be online and face-to-face and meetings on one or two evenings per week. Studies are in English.

If you are interested participating to this programme, please get more information about the content, time table and enrollment information etc. from our web page:

<https://www.metropolia.fi/en/academics/masters-degrees/information-technology>

Update your knowledge and stay competitive!