



University of Cyprus
Medical School

PRECISION MEDICINE IN CLINICAL PRACTICE

E-LEARNING
POSTGRADUATE PROGRAMME (MSc)

Precision Medicine in Clinical Practice

E-LEARNING POSTGRADUATE PROGRAMME (MSc)

ECTS: 90 (FULL/PART TIME) / LANGUAGE OF INSTRUCTION: ENGLISH
TOTAL TUITION FEES: 5,125 EURO – E-Learning

Programme purpose and objectives

Precision medicine is the form of medicine that considers information on variability in genes, proteins, environment and lifestyle to prevent, diagnose, monitor, and treat a certain disease.

The postgraduate programme *Precision Medicine in Clinical Practice* aims to offer health professionals and professionals working in the fields of biomedical sciences, engineering, computer science and beyond, educational training on the applications of precision and personalized medicine in clinical practice. The objectives include comprehension, analysis and evaluation of and competence in the principles of genetics, molecular diagnostics, pharmacology, clinical trials, statistics, artificial intelligence (AI) and machine learning, sensing and nanomedicine, physiological systems and signaling as well as ethics in the context of precision medicine and their clinical applications in different fields of medicine.

CYPRUS

Location: Eastern Mediterranean
Republic of Cyprus –established in 1960
Land Area: 9,240 km² Capital: Nicosia
Member State of the EU since 2004



UNIVERSITY OF CYPRUS

- > Established in 1989, a young but rapidly expanding university, the largest university and main research organization in Cyprus
- > Over 7,000 students both undergraduate and postgraduate, more than 900 faculty and staff members
- > Ranked 452nd (QS Rankings 2026) and ranked #401-500 (Times Higher Education World Rankings 2026) worldwide
- > The biggest employer in Cyprus for young graduates and researchers, currently employs about 700 young scientists using external research funds

MEDICAL SCHOOL

- > Established in 2013, first graduates in 2019
- > Accreditation of the Programme of Studies in 2019 (under Cyprus Agency of Quality Assurance & Accreditation in Higher Education (CYQAA))
- > Process of expansion is ongoing
- > The postgraduate programme is delivered utilizing the UCY's supportive ecosystem and experience in the design and delivery of postgraduate programmes and in line with the Medical School's vision for high quality education, research promotion and upgrade of clinical services.

MEDICAL SCHOOL RANKINGS

> Times Higher Education World University Rankings: #301- 400 Medical and Health (2026)



> US Best Global University Rankings: #455 Clinical Medicine (2026)



> QS World University Rankings: #601- 650 Medicine (2026)



MULTILEVEL BENEFITS FOR THE GRADUATES

The MSc “Precision Medicine in Clinical Practice” at the University of Cyprus fills a key gap in advanced medical education in Cyprus.

- > Designed for scientists and healthcare professionals from fields such as biology, pharmacy, engineering, and data science.
- > Offers specialization in cutting-edge clinical applications and modern medical practices.
- > Enhances employability and strengthens professional skills.
- > Opens career pathways in clinical practice, research, and academia.
- > Supports the development of advanced diagnostic technologies and clinical trials in Cyprus.
- > Part of a rapidly growing global field with increasing demand for expertise.

ADMISSION CRITERIA

1. Submit a full Curriculum Vitae (CV)
2. Hold a Bachelor’s degree from an accredited university
3. Have an academic background in a relevant field (e.g. medicine, nursing, biomedical, biological, pharmacological, engineering, computational, biochemical, molecular sciences, or related disciplines)
4. Minimum Upper Second-Class Honours degree (>60%) and grades >60% in relevant subjects
5. Demonstrate good knowledge of English (as per CYQAA requirements)
6. Provide at least 2 letters of recommendation (preferably including one from a former professor)
7. Submit a short personal statement (max. 2 pages) outlining motivation, relevance to career goals, and interest in Precision Medicine

ACADEMIC AND TEACHING STAFF

- > The academics and collaborators teaching in this postgraduate programme belong to the staff of the University of Cyprus
- > The teaching background will comprise a mixture of basic science and clinical medicine
- > All teaching staff are experienced in teaching, some of them with extensive experience in postgraduate teaching
- > Their professional expertise and/ or research work in their respective fields is directly related to the topic they have been asked to teach in this postgraduate programme.

PROGRAMME KEY INFORMATION



Programme category: E-Learning

Tuition fees: 5,125 euro per student for the entire programme

Programme’s language of instruction: English

Maximum number of students:

10-15 per academic year

Programme duration: Minimum 3 semesters. Maximum 8 semesters.

European credit transfer system: 90 ECTS (60 ECTS courses & 30 ECTS thesis)

The Programme is offered Full time or Part time



PROGRAMME PURPOSE

Traditional patient management has long followed a “one-size-fits-all” approach, using the same diagnostics and treatments for all patients, regardless of individual differences such as genetics, gender, or lifestyle. Over the last decade, precision medicine has transformed clinical practice by personalizing care using genetic, molecular, environmental, and lifestyle data.



The MSc Precision Medicine in Clinical Practice equips health professionals and scientists from biomedical, engineering, and computational fields with the knowledge and skills to apply precision medicine in clinical settings. The programme covers genetics, molecular diagnostics, pharmacology, clinical trials, AI and machine learning, nanomedicine, physiological systems, and ethics, preparing graduates to lead innovation in modern healthcare.

INTENDED LEARNING OUTCOMES OF THE PROGRAMME

Graduates of the MSc Precision Medicine in Clinical Practice will:

- > Master the principles of precision and personalized medicine and their clinical applications.
- > Understand molecular mechanisms, genomic variability, and pharmacogenomics for individualized treatment.
- > Apply biostatistics, AI, and data analytics to support clinical decision-making.
- > Design and conduct clinical trials, following international standards.
- > Use advanced diagnostic, monitoring, and signal analysis techniques.
- > Navigate ethical, legal, and regulatory issues in genomic and clinical research.
- > Integrate precision medicine across clinical domains and lead innovative healthcare projects.
- > Prepare for careers in clinical practice, research, academia, and healthcare policy.



STRUCTURE OF THE PROGRAMME OF STUDY

Compulsory Courses (40 ECTS)

1. Introduction to Medical Statistics, Machine Learning and AI
2. Clinical Trials Essentials and Beyond
3. Precision Diagnostics
4. Clinical Applications of Precision Medicine

CONSTRAINED ELECTIVE COURSES (20 ECTS)

Group 1 – Select 1 course (10 ECTS)

- > Pharmacology and Pharmacogenomics
- > Physiological Systems and Signals

Group 2 – Select 1 course (10 ECTS)

- > Human Medical and Molecular Genetics
- > Instrumentation, Sensors and Application of Nanotechnologies

Postgraduate Thesis (30 ECTS)

- > Postgraduate Thesis (30 ECTS)

PROGRAMME COORDINATOR

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