

MEDICAL INFORMATICS

PHARMA INFORMATICS

Core
modules
both
specializations

Digitalization
in healthcare

6

Digital
transformation
in healthcare

6

Master Thesis

30

Medical data
science

6

Foundations
of Pharma

6

48 ECTS

Specialization
electives

Medical
software
development
(core
elective)

6

Medical
informatics
internship

6

Medicine and
informatics

3

Applied
computational
intelligence

6

Machine
learning in
medicine

3

Development
of Medicines
and Medical
Devices

3

Business
intelligence

6

Biomarkers

3

Innovative
trends in
pharma
informatics

3

Pharma
internship

6

Applied ma-
thematics and
informatics
Drug Disco-
very & Mathe-
matical and
Computational
Biology in
Drug Disco-
very (core
elective)

4

Clinical
decision
support
systems

3

HMI & bias
mitigation

3

Cyber
security in
digital health

3

Quantum
computing

3

Digital
biomarkers

3

Cloud
Computing

6

Laboratory
automation in
pharma
industry

3

Artificial
intelligence in
drug
discovery

3

Pharmaco-
kinetics and
dynamics

3

Specialization elective from Pharma Informatics can be taken as general electives for Medical Informatics and vice versa

≥ 24 ECTS

General
electives

Data science

6

User-
centered
design and
design
thinking

3

IT
governance,
risk, and
compliance

6

Knowledge
processing
and decision
making

6

Healthcare
entrepreneur-
ship

3

rest ECTS

Foundation
pre-courses

Informatics
foundations
for physicians

Life
science
foundations

Mathematics

Business
information
systems

Σ 90 ECTS

6 ECTS

Medical

Pharma

Both specializations

Pre-courses

August 2024