

# MEDICAL INFORMATICS

# PHARMA INFORMATICS

**Core modules both specializations**

- Digitalization of business processes 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)	VR, AR, and tech driven medicine (3)	Applied computational intelligence (6)	Machine learning in medicine (3)	Development of Medicines and Medical Devices (3)	Business intelligence (6)	Genetic Biomarkers (3)	Innovative trends in Medical informatics (focus pharma) (3)	Pharma internship (6)	Applied mathematics and informatics in drug discovery & Mathematical and Computational Biology in Drug Discovery (core elective) (4)
	Clinical decision support systems (3)	Human machine interaction and BIAS mitigation (3)	Cyber security in health (3)	Quantum computing (3)	Digital biomarkers (3)	Cloud Computing (6)	Laboratory automation in pharma industry (3)	Artificial intelligence in drug discovery (3)	Pharmacokinetics and pharmacodynamics (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)

rest ECTS

**Foundation pre-courses**

- Informatics foundations
- Life science foundations
- Mathematics
- Business information systems