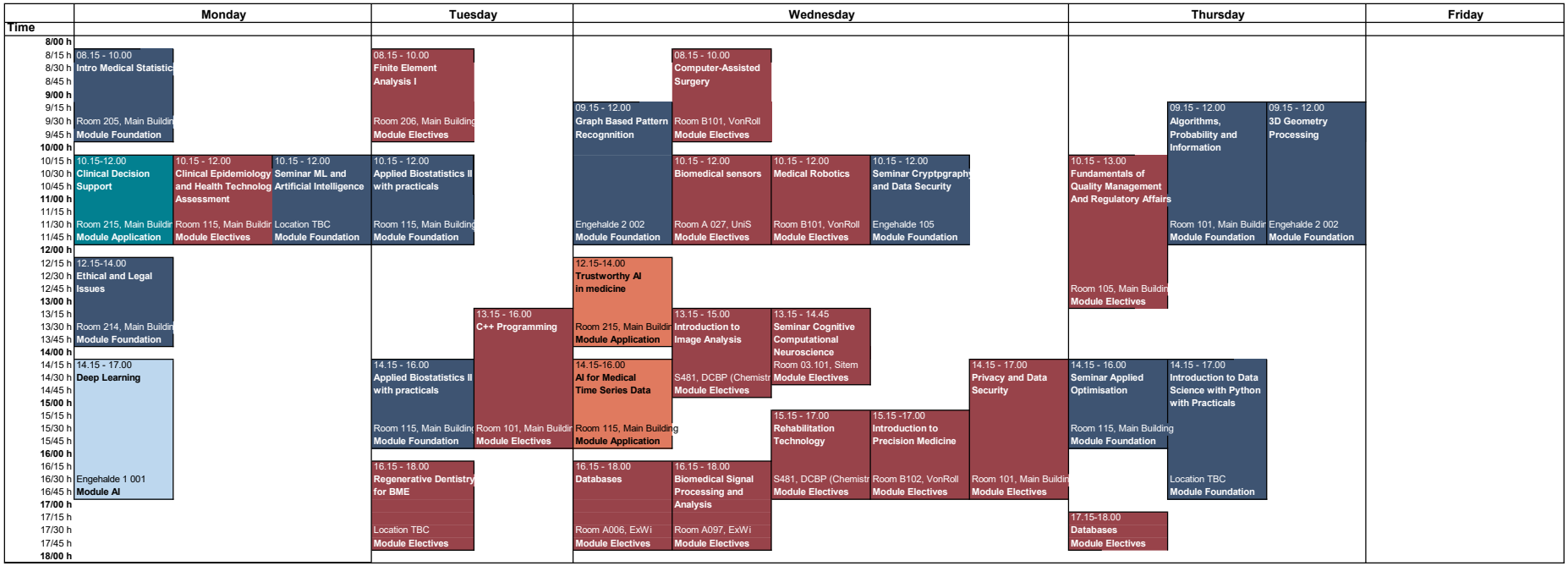
MSc Artificial Intelligence in Medicine, University of Bern - Timetable Spring Semester 2026 - Second Semester Courses



Module Medicine (mandatory)

- Clinical Implementations of AI I (3 ECTS)
- Clinical Decision Support (3 ECTS)

Module AI (mandatory)

- Deep Learning (5 ECTS)

Module Applications (mandatory)

- AI for Medical Time Series Data (3 ECTS)
- Trustworthy AI in Medicine (3 ECTS)

Module Foundation

The selection of courses in the module *Foundation* depends on the students' individual scientific background. The following list is a pool of suggested courses. Students may consider courses not found on the list.

- 3D Geometry Processing (5 ECTS)
- Algorithms, Probability and Information (5 ECTS)
- Applied Biostatistics II with practicals (4 ECTS)
- Ethical and Legal Issues (3 ECTS) - can also be elective
- Graph-Based Pattern Recognition (5 ECTS)
- Introduction to Data Science with Python with Practicals (5 ECTS)
- Introduction to Medical Statistics (3 ECTS)
- Seminar Applied Optimisation (5 ECTS)
- Seminar Cryptography and Data Security (5 ECTS)
- Seminar Machine Learning and Artificial Intelligence (5 ECTS)

Module Electives

The selection of courses from the module *Electives* depends on the students' interests. The following list is a pool of suggested courses. Students may consider courses not found on the list.

- Biomedical Sensors (3 ECTS)
- Biomedical Signal Processing and Analysis (3 ECTS)
- C++ Programming (3 ECTS)
- Clinical Epidemiology and Health Technology Assessment (2 ECTS)
- Computer-Assisted Surgery (3 ECTS)
- Databases (5 ECTS)
- Finite Element Analysis I (3 ECTS)
- Fundamentals of Quality Management and Regulatory Affairs (4 ECTS)
- Introduction to Image Analysis (5 ECTS)
- Introduction to Precision Medicine (3 ECTS)
- Medical Robotics (3 ECTS)
- Privacy and Data Security (5 ECTS)
- Proteomics & Metabolomics (lecture and practicals) (5 ECTS) - Various dates so not in timetable
- Regenerative Dentistry for Biomedical Engineering (2 ECTS)
- Rehabilitation Technology (3 ECTS)
- Seminar Advanced Topics in Reinforcement Learning and Decision Making (5 ECTS) - see JMCS website
- Seminar Cognitive Computational Neuroscience (5 ECTS)
- Seminar Explainable AI (5 ECTS) - see JMCS website
- Semnnar Life Engineering (5 ECTS) - see JMCS website