

| Minor "Artificial Intelligence in Biomedical Engineering" (AIBE) - Master AI | | | | | Contact: Marlene Reuschel: marlene.reuschel@fau.de or Thomas Seel: thomas.seel@fau.de | | | |
|--|---|--------------------|------------------------|----------|---|------|--|--|
| Module-Title | Lecturer | Language | Type | WS/SS | SWS | ETCS | Exam-Details | |
| AIMI – Artificial Intelligence in Medical Imaging Lab | | | | | | | | |
| Seminar Digital Pathology and Deep Learning (SemDP) | Breiningger | English | Seminar | SS | 2 | 5 | seminar performance, assessed | |
| ExpHNO – Experimental Otorhinolaryngology | | | | | | | | |
| Cognitive Neuroscience for AI Developers | Krauss, Maier | English | Lecture | SS | 4 | 5 | written exam, 60min | |
| HEX – Chair of Human-Centered Computing and Extended Reality | | | | | | | | |
| Virtual Reality in Neuroscience | Roth | English | Seminar | SS23+ | 4 | 5 | Lecture, project work, part exam | |
| Exergames | Roth/ Morschheuser | English | Lecture /Project | WS21/22+ | 4 | 5 | Lecture, project work, part exam | |
| ISS – Chair of Intelligent Sensorimotor Systems | | | | | | | | |
| AI in Medical Robotics | Seel | English | Lectures +Exercises | WS | 4 | 5 | written exam, 60min | |
| LME – Pattern Recognition Lab | | | | | | | | |
| Colloquium in Pattern Recognition [subLV: Kolloquium MRI] | Bickelhaupt/ Knoll/Laun/ Maier/Nagel/ Zaiss | English | Seminar | WS+SS | 2 | 2,5 | seminar performance, assessed | |
| Medical Image Processing for Diagnostic Applications (MIPDA) | Maier | English | Lecture | WS+SS | 2 | 5 | written exam, 60min | |
| Interventional Medical Image Processing | Maier | English | Lecture | WS+SS | 2 | 5 | written exam, 60min | |
| IDEA – Image Data Exploration and Analysis Lab | | | | | | | | |
| Medizintechnik II | Knoll/ Kainz | German /English | Lecture | SS | 4 | 5 | modular exam (report, code implementation, presentation, homework) | |
| MAD – Machine Learning and Data Analytics Lab | | | | | | | | |
| The why and how of human gait simulations [HGS] | Koelewijn | English | Seminar | WS | 2 | 2,5 | seminar performance, assessed | |
| A look inside the human body - gait analysis and simulation (GAS) | Koelewijn | English | Lecture | WS | 2 | 2,5 | oral exam, 30min | |
| Gait Analysis and Simulation+ (GAS+) | Koelewijn | English | Lecture +Exercise | WS | 5 | 4 | written exam, 60min | |
| Biomedical Signal Analysis (BioSig) | Kluge/ Eskofier | English | Lectures +Exercises | WS | 2 (+2Ü) | 5 | written exam, 60min | |
| N-squared – Neuromuscular Physiology and Neural Interfacing | | | | | | | | |
| Interfacing the Neuromuscular System | Del Vecchio | English | Lecture | SS | 3 | 5 | oral exam, 30min | |
| Movement Neuroscience | Del Vecchio | English | Lectures +Exercises | WS | 2 (+1Ü) | 5 | oral exam, 30min | |
| Interpretation and Analysis of Neural and Muscle Signals | Del Vecchio /Yang | English | Seminar | WS | 2 | 2,5 | oral exam, 30min | |
| Physiological Driven Control and Design of Exoskeletons | Del Vecchio | English | Seminar | WS | 3 | 5 | oral exam, 30min | |
| SLP – Chair of AI in Biomedical Speech and Language Processing | | | | | | | | |
| Seminar Digital Pathology using Speech Language Processing | Yang | English | Seminar | WS | 2 | 2,5 | oral exam, 30min | |
| Seminar Automatic Analysis of Voice, Speech and Language Disorders in Speech Pathologies | Yang | English | Seminar | WS+SS | 2 | 2,5 | seminar performance, presentations | |
| MediRob – Chair of Medical Robotics | | | | | | | | |
| Seminar Rehabilitation and Assistive Robotics (SemRAR) | Sierotowicz | English | Seminar | WS | 2 | 2,5 | report+ presentation | |
| Seminar: Robotics for the Lower Limb (RLL) | Egle | English | Seminar | WS | 2 | 2,5 | report+ presentation | |
| Rehabilitation and Assistive Robotics (RAR) | Castellini/ Sierotowicz | English | Lectures +Exercises | SS | 4 | 5 | written exam, 60min | |
| Seminar Learning and Interaction in Medical Robotics (IMR) | Sierotowicz | English | Seminar | SS | 2 | 2,5 | report+ presentation | |
| Seminar: Biosignals in Rehabilitation Robotics (BRR) | Egle | English | Seminar | SS | 2 | 2,5 | report+ presentation | |
| Upper-Limb Prosthetics (ULP) | Castellini/ Sierotowicz | English | Lectures +Exercises | WS | 4 | 5 | written exam, 60min | |