

CURRICULUM B.SC. APPLIED ARTIFICIAL INTELLIGENCE

ONLINE STUDIES, FULL-TIME (36 MONTHS)

| Semester | | Module | Course Code | Course | ECTS credits | Type of Exam |
|----------------|--------------|--|-----------------------------|--|--------------|--------------------------|
| FT | PT I / PT II | | | | | |
| 1. Semester | 1. Semester | Artificial Intelligence | DLBDSEAI01 | Artificial Intelligence | 5 | Exam |
| | | Introduction to Academic Work | DLBCSIAW01 | Introduction to Academic Work | 5 | Basic Workbook |
| | | Introduction to Programming with Python | DLBDSIPWP01 | Introduction to Programming with Python | 5 | Exam |
| 2. Semester | 2. Semester | Mathematics: Analysis | DLBDSMFC01 | Mathematics: Analysis | 5 | Exam |
| | | Collaborative Work | DLBCSCW01 | Collaborative Work | 5 | Oral Assignment |
| | | Statistics - Probability and Descriptive Statistics | DLBDSPPS01 | Statistics - Probability and Descriptive Statistics | 5 | Exam |
| 3. Semester | 3. Semester | Object Oriented and Functional Programming with Python | DLBDSOFP01 | Object Oriented and Functional Programming with Python | 5 | Portfolio |
| | | Mathematics: Linear Algebra | DLBDSMFLA01 | Mathematics: Linear Algebra | 5 | Exam |
| | | Intercultural and Ethical Decision-Making | DLBCSIDM01 | Intercultural and Ethical Decision-Making | 5 | Case Study |
| 4. Semester | 4. Semester | Statistics - Inferential Statistics | DLBDSIS01 | Statistics - Inferential Statistics | 5 | Exam |
| | | Cloud Computing | DLBDSCC01 | Cloud Computing | 5 | Exam |
| | | Cloud Programming | DLBSEPCP01_E | Cloud Programming | 5 | Portfolio |
| 5. Semester | 5. Semester | Machine Learning - Supervised Learning | DLBDSMLS01 | Machine Learning - Supervised Learning | 5 | Exam |
| | | Machine Learning - Unsupervised Learning and Feature Engineering | DLBDSMLS01 | Machine Learning - Unsupervised Learning and Feature Engineering | 5 | Case Study |
| | | Neural Nets and Deep Learning | DLBDSNNDL01 | Neural Nets and Deep Learning | 5 | Oral Assignment |
| 6. Semester | 6. Semester | Introduction to Computer Vision | DLBAIPC01 | Introduction to Computer Vision | 5 | Exam |
| | | Project: Computer Vision | DLBAIPC01 | Project: Computer Vision | 5 | Project Report |
| | | Introduction to Reinforcement Learning | DLBAIRL01 | Introduction to Reinforcement Learning | 5 | Exam |
| 7. Semester | 7. Semester | Introduction to NLP | DLBAINLP01 | Introduction to NLP | 5 | Exam |
| | | Project: NLP | DLBAINLP01 | Project: NLP | 5 | Project Report |
| | | Introduction to Data Protection and IT Security | DLBDSIDPITS01 | Introduction to Data Protection and IT Security | 5 | Exam |
| 8. Semester | 8. Semester | Data Science Software Engineering | DLBDSSE01 | Data Science Software Engineering | 5 | Exam |
| | | Project: From Model to Production | DLBDSMTP01 | Project: From Model to Production | 5 | Oral Project Report |
| | | Seminar: Ethical Considerations in Data Science | DLBDSSECD01 | Seminar: Ethical Considerations in Data Science | 5 | Research Essay |
| 9. Semester | 9. Semester | User Experience | DLBMIUEX01_E | User Experience | 5 | Exam |
| | | UX-Project OR Project: Edge AI | DLBMIUEX02_E OR DLBAIPEAI01 | UX-Project OR Project: Edge AI | 5 | Project Report |
| | | Introduction to Robotics | DLBROI01_E | Introduction to Robotics | 5 | Written Assignment |
| 10. Semester | 10. Semester | Agile Project Management | DLBCSAPM01 | Agile Project Management | 5 | Project Report |
| | | ELECTIVE A* | | e.g. Autonomous Driving | 10 | |
| | | ELECTIVE B* | | e.g. Automation and Robotics | 10 | |
| 11. Semester | 11. Semester | ELECTIVE C* | | e.g. Data Engineer | 10 | |
| | | Bachelor Thesis | | Bachelor Thesis | 9 | Bachelor Thesis |
| Thesis Defense | | | | | 1 | Presentation: Colloquium |
| Total | | | | | 180 | ECTS credits |



You've already planned out exactly how your course schedule should look? Wonderful! The IU offers you the flexibility to choose any module you like from any semester. You can work on a number of modules at the same time or one by one.

At the beginning, choose modules that particularly interest you or that you can use directly in your job. This motivates you and gives you success right from the start.

A module with two courses consists of an introduction and a consolidation. In order to successfully complete a module, you must successfully pass both the introduction and the consolidation of the module within the framework of a module examination.

* Electives: Choose three modules, every elective module can only be chosen once.

FT: Full-Time, 36 months
PT I: Part-Time I, 48 months
PT II: Part-Time II, 72 months

| Elective A: | Elective B: | Elective C: |
|--|--|--|
| Autonomous Driving Production Engineering, Automation and Robotics Data Engineer Digital Signal Processing and Sensor Technology Database Developer Business Intelligence Data Analyst Augmented, Mixed and Virtual Reality | International Marketing and Branding Applied Sales Supply Chain Management IT project and architecture management Psychology of Human Computer Interaction | Autonomous Driving Production Engineering, Automation and Robotics Data Engineer Digital Signal Processing and Sensor Technology Database Developer Business Intelligence Data Analyst Augmented, Mixed and Virtual Reality International Marketing and Branding Applied Sales Supply Chain Management IT project and architecture management Psychology of Human Computer Interaction Foreign Language Italian Foreign Language French Foreign Language German Foreign Language Spanish Studium Generale Career Development |

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You can find more information about your degree program in the module handbook on our website.