

English Courses at FAU for Computer Science

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This information could change, so please additionally look up more recent information in campo: <https://www.campo.fau.de>

Use our How-To Guide: <https://www.informatik.studium.fau.de/studierende/erasmus-incoming-students/#choosing-courses>

These are courses at the Department of Computer Science. You can also choose courses of other departments.

Not listed are any courses that are only partially in English (with the exception of AI I) or that require other courses that are only available in German. Always consult the campo page for more information on the course and its content, as well as required skills.

| Course Name | B | M | ECTS | Winter | Summer | Comment |
|--|---|---|------|--------|--------|---|
| Advanced deep learning | | X | 5 | X | | |
| Advanced networking LEx | | X | 5 | X | | |
| Advanced programming techniques | X | X | 7.5 | X | | |
| Algorithmic Bioinformatics | | X | 5 | X | | |
| Algorithms of numerical linear algebra | | X | 7.5 | X | | |
| Applied Software Architecture | | X | 5 | X | | |
| Approximate computing | | X | 5 | | X | |
| Architectures of supercomputers | | X | 5 | X | | |
| Artificial Intelligence I | X | X | 7.5 | X | | Partially in German, listed here as AI II is in English |
| Artificial Intelligence II | X | X | 7.5 | | X | Extends AI I |
| Biomedical signal analysis | X | X | 5 | X | | |
| Coaching Agile teams | | X | 5 | X | X | Students must have completed the AMOS-PO or SD role |
| Commercial open source startups (OSS-COSS) | | X | 5 | X | | |
| Communication systems | X | X | 5 | X | | |
| Computational photography and capture | | X | 5 | | X | |
| Computational visual perception | X | X | 7.5 | X | | |

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|---|---|---|-----|---|---|---|
| Computer Graphics Deluxe | X | X | 7.5 | X | | Also available as Computer Graphics for 5 ECTS |
| Computer vision | X | X | 5 | | X | |
| Cryptographic communication protocols | X | X | 5 | | X | Language given as 'German or English' |
| Deep learning | | X | 5 | X | X | |
| Deep learning for beginners | X | | 2.5 | X | X | |
| Formal methods of software development | X | X | 7.5 | X | | Language given as 'German or English' |
| Foundations of linked data | | X | 5 | | X | |
| Functional analysis for engineers | | X | 5 | X | | |
| Geometric modeling | X | X | 5 | X | | |
| Hardware-software-co-design | X | X | 5 | | X | Choose at most one of these courses |
| Hardware-software-co-design (Lecture with extended exercises) | X | X | 7.5 | | X | |
| Heterogeneous computing architectures online | | X | 5 | X | X | Language given as 'German or English' |
| High End Simulation in Practice (HESP) | | X | 7.5 | | X | |
| Human computer interaction | X | X | 5 | | X | |
| Information visualization | X | X | 5 | | X | |
| Introduction to Cybersecurity Fundamentals in Networking | | X | 5 | X | | |
| Introduction to Dependently Typed Programming (IDenT) | | X | 7.5 | | | Offered Irregularly |
| Introduction to machine learning | X | X | 5 | | X | |
| Introduction to modern cryptography | X | X | 7.5 | X | | |
| Introduction to network science | X | X | 5 | | X | |
| Introduction to privacy | X | X | 5 | | | Offered Irregularly |
| Knowledge discovery in databases with tutorial | X | X | 5 | | X | |
| Logic-based Natural Language Semantics | X | X | 2.5 | X | | |
| Machine learning for time series | X | X | 5 | X | | |
| Machine Learning Security | | X | 5 | X | | |
| Methods of Advanced Data Engineering | X | X | 5 | | | Offered Irregularly |
| Modelling and Synthesis of Digital Systems | | X | 5 | | X | |
| Monad-based programming | X | X | 7.5 | | | Language given as 'German or English'; Offered Irregularly |
| Multimedia security | | X | 5 | X | | |
| Music processing analysis - Lecture and exercise | X | X | 5 | X | | |

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|--|---|---|-----|---|---|--|
| Nailing your thesis | X | X | 5 | | X | |
| Neural graphics and inverse rendering | X | X | 5 | X | | |
| Parallel systems | X | X | 5 | | X | Course language will be determined by participants in the first few weeks; Choose at most one of these courses |
| Parallel systems with extended exercises | X | X | 7.5 | | X | |
| Pattern analysis | | X | 5 | | X | |
| Pattern recognition | X | X | 5 | X | | Language given as 'German or English' |
| Physically-based simulation in computer graphics | X | X | 5 | | X | |
| Practical parallel algorithms with MPI | | X | 5 | X | | Also offered in German |
| Process-oriented information systems | | X | 5 | | X | |
| Programming techniques for supercomputers | X | X | 7.5 | | X | |
| Project Symbolic Natural Language Processing | X | X | 2.5 | | X | |
| Quality of service in communication systems | X | X | 5 | | X | |
| Radar signal processing | | X | 5 | X | | |
| Radar, RFID and wireless sensor systems (RWS) | | X | 5 | | X | |
| Reconfigurable computing | X | X | 5 | X | | |
| Reinforcement learning | | X | 5 | | X | |
| Resistive RAM and In-Memory Computing | | X | 5 | X | X | |
| Scientific visualization | X | X | 5 | | X | |
| Security in embedded hardware | X | X | 5 | | X | |
| Simulation and modelling I | X | X | 5 | X | | |
| Speech and Language Processing | X | X | 5 | | X | |
| Swarm Intelligence | X | X | 5 | | X | |
| The AMOS Project | X | X | 10 | X | X | |
| Visual computing in medicine | X | | 5 | X | | |
| Visualization | X | X | 5 | X | | |

B = Bachelor

M = Master