

Cyber Security – International Master's Programme (M. Sc.)

Cyber Security Basics

Mandatory Modules (22 ECTS credit points)

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| • 11889 Introduction into Cyber Security | 8 CP |
| • 11859 Cryptography | 8 CP |
| • 11891 IT Security Law | 6 CP |

Cyber Security Methods

Compulsory Elective Modules (28–34 ECTS credit points)

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| • 11862 Pervasive System Security | 6 CP |
| • 11897 Security of Resource-constraint Systems | 6 CP |
| • 11892 Software Security | 6 CP |
| • 11863 Hands on Knowledge for Side Channel Attacks | 6 CP |
| • 11899 Cyber Security Application Areas | 6 CP |
| • 11898 Cyber Security Lab (e.g. Ethical Hacking) | 6 CP |
| • 12979 Internet Measurements and Forensics | 6 CP |
| • 12973 Network and System Security | 6 CP |
| • 11896 Seminar (e.g. Advanced Topics in Network and System Security) | 4 CP |

Computer Science

Compulsory Elective Modules (12–18 ECTS credit points)

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| • 12448 Web-Technologies Lab | 4 CP |
| • 11886 Dependability and Fault Tolerance | 6 CP |
| • 11881 Foundations of Data Mining | 6 CP |
| • 11847 Neural Networks and Learning Theory | 8 CP |
| • 11882 Software Project Management | 8 CP |
| • 11883 Internet – Functionality, Protocols, Applications | 8 CP |
| • 11864 Wireless Sensor Networks: Concepts, Protocols and Applications | 6 CP |
| • 11884 Introduction into Concurrency | 8 CP |
| • 11887 Software Dependability | 8 CP |
| • 11885 Software Testing | 8 CP |
| • 11861 Operating Systems II (Multi-Level Memory Management) | 6 CP |
| • 11860 Distributed and Parallel Systems II (Concurrency, Replication and Consistency) | 6 CP |
| • 12316 Specification Languages and Processing Techniques for Web Documents | 6 CP |
| • 12976 Processor Architecture | 8 CP |
| • 12882 Embedded Real-Time Systems | 6 CP |

Modules for Specialisation

(46 ECTS credit points)

Study Project

11894 (8 ECTS credit points)
e.g. Adversarial Machine Learning

General Studies (»FÜS«)

to be selected from a list (6 ECTS credit points)

Internship

11893 (8 ECTS credit points)

Master Thesis

11888 (30 ECTS credit points)