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

Brandenburg University of Technology Cottbus - Senftenberg

Cyber Security Basics

Mandatory Modules (22 ECTS credit points)

· 11889 Introduction to Cyber Security	8 CP
· 11859 Cryptography	8 CP
· 11891 IT Security Law	6 CP

Modules for Specialisation (44 ECTS credit points*)

Cyber Security Methods

Compulsory Elective Modules (28–32 ECTS credit points)

· 11862 Pervasive System Security	6 CP
· 11863 Hands on Knowledge for Side Channel Attacks	6 CP
· 11892 Software Security	6 CP
· 11897 Security of Resource-constraint Systems	6 CP
· 11898 Cyber Security Lab (e.g. Ethical Hacking)	6 CP
· 11899 Cyber Security Application Areas	6 CP
· 12790 Seminar Advanced Topics in Network and System Security	6 CP
· 12973 Network and System Security	6 CP
· 12979 Internet Measurements and Forensics	6 CP
· 13490 Secure Cyber-Physical Systems	6 CP
· 13800 Engineering of Trustworthy Systems	8 CP
· 14035 Appl. of Side-Channel Analysis Methods in the Earlier Design Phase of Cryptogr. Implement.	6 CP

Computer Science

Compulsory Elective Modules (12–16 ECTS credit points)

· 11847 Neural Networks and Learning Theory	8 CP
· 11860 Distributed and Parallel Systems II (Concurrency, Replication and Consistency)	6 CP
· 11861 Operating Systems II (Multi-Level Memory Management)	6 CP
· 11864 Wireless Sensor Networks: Concepts, Protocols and Applications	6 CP
· 11881 Foundations of Data Mining	6 CP
· 11886 Dependability and Fault Tolerance	6 CP
· 12882 Embedded Real-Time Systems	6 CP
· 12975 Internet – Functionality, Protocols, Applications	6 CP
· 12976 Processor Architecture	8 CP
· 12979 Internet Measurements and Forensics	6 CP
· 13513 Communication Networks / Security Research Class	6 CP
· 13690 Hands on Wireless Sensor Network Applications	6 CP
· 13911 Algebra: Structures and Algorithms	6 CP
· 13912 Coding Theory	6 CP
· 14021 Explainable Machine Learning	6 CP

Study Project

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

General Studies (»FÜS«)

to be selected from the General Studies list
(6 ECTS credit points)

Internship

14144 (10 ECTS credit points)

Master Thesis

11888 (30 ECTS credit points)

Five-digit codes: module numbers with direkt links to the respective module description
*Ungraded Modules are only eligible for a maximum of overall 12 ECTS credit points in »Modules for Specialisation«

Updated: 21 April 2026