

Cyber Security and Business Bachelor

Kurzübersicht

Degree	Bachelor of Science
Standard Study Period	6 Semester
Start	Winter semester
Teaching language	English
Location	Campus Wilhelminenhof Wilhelminenhofstraße 75A 12459 Berlin
Eligibility Requirements and Admission	<ul style="list-style-type: none"> • Fachhochschulreife (Advanced technical college certificate) or • Allgemeine Hochschulreife/Abitur (General higher education entrance qualification; GCE A-levels) or • Relevant higher education entrance qualification as specified in § 11 II BerlHG • Proof of English language proficiency
Internship	12 weeks (450 hours) starting at the end of the 5th semester
Credit Points to obtain	180
Master's degree programmes at HTW Berlin	Master in Angewandte Informatik, Wirtschaftsinformatik, Informatik in Ingenieurwissenschaften

This study program tackles both sides of the coin. In the Cyber Security and Business degree program you will be able to understand how hackers operate and what vulnerabilities to look for. By adding the business side, you will be able to see the bigger picture. You will learn how cyberattacks can cripple a company's finances, damage its reputation, and even lead to legal trouble. You will understand to mitigate the risks and how to create the awareness. After you graduated you will be able to talk to both the techies and the executives! You will become the bridge between understanding the threats and communicating the impact to decision-maker. Thanks to lessons taught entirely in English, a study semester and even an internship abroad is possible. In total, you will be ideally prepared for both the domestic as well as the international labour market.



Mehr Infos über den Studiengang:
<https://cyber-security-business.htw-berlin.de>

Study programme

- The degree programme provides knowledge to understand both the technical aspects of cyber threats and the business impact and uniquely positioned you to navigate this landscape.
- **languages:** the programme is taught entirely in English, during your studies you can learn two additional foreign languages
- **Specialisations:** Elective modules **Forensics, Critical Infrastructure [CI] or Distributed Ledger Technology / Blockchain Technology** give you the opportunity to deepen your knowledge in a targeted way from the 4th semester onwards.
- **Going international:** An internship (abroad) is an established part of the degree programme. There is also the possibility of semesters abroad
- **studying the future needs:** a Bachelor's degree in "Cyber Security and Business" qualifies you to...
 - ..protect companies and organisations from cyber attacks, implement current security standards.
 - ..protect information and communication systems preventively.
 - ..identify and analyse (potential) threats.
 - ..monitor IT systems.
 - ..consider the economic and legal aspects of IT security.

Career

The sheer number of cyberattacks is on the rise, but so is their complexity. Hackers are leveraging cutting-edge tools and techniques to exploit vulnerabilities in outdated systems, inadequate security measures, and even human mistakes. This significantly increases the risk of successful breaches of IT infrastructure. There is a high demand for qualified professionals with a broad knowledge of the trends and interdependences not only in the corporate world but also in government and public authorities.

You will be able to work in areas such as:

- Cyber Security Auditor
- Consultancies
- IT Security Manager
- Penetration Tester
- Malware-Analyst
- IT Forensic Expert
- Business Continuity Manager
- Weakness Data Analyst
- Security Engineer -Blockchain



Further questions?
The Study Advisory Service team will be pleased to help you
(030) 5019-2254
studienberatung@htw-berlin.de
htwb.de/studienberatung

Type of Module:

CM: Compulsory Module, EM: Elective Module

Form of teaching:

PCE: PC Exercise, AE: Accompanying Exercise, PE: Practical Exercise, SSL: Seminar-Style Lecture,

PS: (Project) Seminar

SWS: Weekly Study Hours, Cr: Credits (ECTS)

Modules Bachelor Semester 1		Mode	Type	SWS	Cr
1	Programming	CM	SSL/PCE	3/2	6
2	General Computer Science	CM	SSL/PCE	2/2	5
3	Fundamentals of IT Security	CM	SSL	4	5
4	Mathematics	CM	SSL/PE	3/1	5
5	IT Security in Law and Society	CM	SSL	4	5
6	Foreign Language 1	EM	PE	4	4
Total per semester					30

Modules Bachelor Semester 2		Mode	Type	SWS	Cr
7	Statistics	CM	SSL/PCE	3/2	5
8	Cloud IT	CM	SSL/PCE	2/2	5
9	Safety and Security in IT Systems	CM	SSL/PCE	3/2	6
10	Web Applications / Software Architecture	CM	SSL/PCE	2/2	5
11	Introduction to Business Administration	CM	SSL	4	5
12	Foreign Language 2	EM	PE	4	4
Total per semester					30

Modules Bachelor Semester 3		Art	Form	SWS	LP
13	IT Networks	CM	SSL/PCE	2/2	6
14	Cryptology	CM	SSL/PCE	2/1	5
15	Databases	CM	SSL/PCE	2/2	5
16	Social Engineering	CM	SSL/PCE	2/1	5
17	Scientific Work	CM	SSL/PCE	2/2	6
18	Supplementary Elective Module 1	EM	PA	2	2
19	Supplementary Elective Module 2	EM	PA	2	2
Total per semester					30

Modules Bachelor Semester 4		Mode	Type	SWS	Cr
20	Mobile Devices	CM	SSL	2	5
21	Network and System Security	CM	SSL/PCE	2/2	5
22	IT Security Management Project	EM	PS	3	5
23	Emergency Preparedness and Management	CM	SSL/PCE	2/2	5
24	Elective Module 1	EM		4	5
25	Elective Module 2	EM		4	5
Total per semester					30

Modules Bachelor Semester 5		Mode	Type	SWS	Cr
26	IoT Security	CM	SSL/PCE	2/2	5
27	Digital Economy	CM	SSL	4	5
28	IT Law and Data Protection	CM	SSL	4	5
29	Norms, Standards and Certification	CM	SSL	4	5
30	Elective Module 3	EM		4	5
31	Elective Module 4	EM		4	5
Total per semester					30

Modules Bachelor Semester 6		Mode	Type	SWS	Cr
32	Specialist Internship* Internship Seminar	CM	PS	1	15
33	Bachelor's Thesis	CM			12
34	Bachelor's Thesis Seminar and Final Oral Examination	CM	PS	2	3
Total per semester					30
Overall total					180

* The specialist internship lasts 12 weeks (450 hours) and usually takes place from the 24th week of the 5th semester until the end of the 9th week of the 6th semester.

Bachelor's Programme Cyber Security and Business Elective Modules 1-4 /Specializations

Each semester, students are generally offered a choice of four modules for the elective modules 1-4. Four modules totalling 20 ECTS credits can be selected from the modules offered in the 4th and 5th semesters. Students receive a certificate showing the modules that they have completed from the elective programme amounting to 20 ECTS credits assigned to the respective specialisation. If no module has been successfully completed in the context of a specialisation, this is not shown. The assignment of modules to the respective specialisations and the prerequisites for the same are shown in the following tables.

Comprehensive modules

1	Emergency Management & Psychological Aspects	PE
2	Security Awareness	PE

Specialisation Forensics

1	Forensics in Operating Systems	PCE
2	Analysis Methods for Forensic Data	PCE
3	Forensics Psychology	PE
4	Digital Investigation	PCE
5	Testing & Hacking	PCE
6	Current Topics in Forensics	PE

Specialisation Critical Infrastructure (CI)

1	Critical Infrastructure Protection	PE
2	Security Operation (SOC)	PCE
3	Handling Specific Risks	PE
4	Testing & Hacking	PCE
5	Change Management (IT & HR)	PS
6	Current Topics in CIKR	PE

Specialisation Distributed Ledger Technology (DLT)

1	Fundamentals of Blockchain Technology/DLT	PCE
2	Project Management	PS
3	Blockchain Business Development	PE
4	Blockchain Security	PCE
5	Change Management (IT & HR)	PS
6	Current Topics in Blockchain-Technology	PE

Specialist entry qualifications in accordance with § 11, paragraph 2 of the BerlHG

The following vocational training qualifications are suitable for enrolment in accordance with § 11 paragraph 2 of the BerlHG (Berliner Hochschulgesetz):

- Assistant - Computer Science (General Computer Science)
- Assistant - Computer Science (Media Informatics)
- Assistant - Computer Science (Software Engineering)
- Assistant - Computer Science (Computer Engineering)
- Assistant - Computer Science (Business Informatics)
- Data Entry Specialist
- Specialist Consultant - Integrated Systems
- Specialist Consultant - Software Engineering
- IT Specialist
- IT Specialist - Application Development
- IT Specialist - Data and Process Analysis
- IT Specialist - Digital Networking
- IT Specialist - System Integration
- IT Administrator
- Information and Telecommunications Administrator
- Industrial Clerk
- Industrial Technologist
- IT Systems Electronics Engineer
- IT Systems Administrator
- Business Assistant - Business Informatics
- Business Assistant - Information Processing
- Digitisation Manager
- Security Technician (IT)
- IT System Management Administrator
- Business Assistant - Business Informatics
- Business Assistant - Information Processing
- Mathematical-Technical Assistant
- Mathematical-Technical Software Developer
- Technical Assistant - Electronics and Data Technology

The Programme Counsellor for the International Business Bachelor's programme shall decide upon the content comparability of vocational training programmes other than those listed here.

Proof of English Language Proficiency

Allocation of a study place is contingent upon the candidate having adequate English language skills. English language skills are certified via evidence provided by the applicant that he/she has achieved a minimum score in a language test.

Valid are

- TOEFL tests with a result of at least 95 points for the internet-based test or
- IELTS tests (Academic) with a level of at least 7.0 or
- PTE Academic Tests with at least 76 points or comparable tests attesting English proficiency at level C1 of the Common European Framework of Reference for Languages (CEFR).

Applicants who have acquired their higher education entrance qualification in English-speaking OECD countries are not required to provide proof of language skills. Decisions regarding the acceptance of further language tests and minimum scores to be evidenced shall be made by the Examination Board of the International Business programme.

Not accepted as proof:

- "Abitur" (GCE A-levels) certificate
- Certificates of English language proficiency on levels below C1 (e.g. B1, B2, etc.)
- Certificates without level specification
- References from previous employers
- Au-Pair certificates
- Work and Travel Certificates
- High-school attendance without a high-school diploma
- Confirmation concerning application for English tests
- Confirmation about completed English courses without a grade certificate
- Proof that a programme has been studied in English with less than 60 ECTS-credits

Command of German

Proof of sufficient knowledge of the German language is not required from applicants for Bachelor of International Business. We do, however, recommend gaining at least an elementary knowledge of the language, as this will make your everyday life in Berlin much easier.