

CURRICULUM M.SC. COMPUTER SCIENCE, 120 ECTS, FULL-TIME (24 MONTHS)

| Semester | Module | Course Code | Course Name | ECTS | |
|---------------------------|--|--------------|---|------|------|
| 1. Semester 30 ECTS | Programming with Python | DLMDSPWP01 | Programming with Python | 5 | WAWA |
| | Software Engineering: Software Processes | DLMCSSESP01 | Software Engineering: Software Processes | 5 | OA |
| | Advanced Mathematics | DLMDSAM01 | Advanced Mathematics | 5 | E |
| | Advanced Statistics | DLMDSAS01 | Advanced Statistics | 5 | WB |
| | Data Science | DLMBDSA01 | Data Science | 5 | E |
| | Project: Software Engineering | DLMCSPSE01 | Project: Software Engineering | 5 | P |
| 2. Semester 30 ECTS | Algorithmics | DLMCSA01 | Algorithmics | 5 | E |
| | Cyber Security and Data Protection | DLMCSITSDP01 | Cyber Security and Data Protection | 5 | OA |
| | Seminar: Computer Science and Society | DLMCSSCSAS01 | Seminar: Computer Science and Society | 5 | WARE |
| | Artificial Intelligence | DLMIAI01 | Artificial Intelligence | 5 | E |
| | Big Data Technologies | DLMDSBDT01 | Big Data Technologies | 5 | OA |
| | Project: Computer Science Project | DLMCSPCSP01 | Project: Computer Science Project | 5 | P |
| 3. Semester 30 ECTS | Seminar: Current Topics in Computer Science | DLMCSSCTCS01 | Seminar: Current Topics in Computer Science | 5 | WARE |
| | Networks and Distributed Systems | DLMCSNDS01 | Networks and Distributed Systems | 5 | E |
| | ELECTIVE MODULE I ** | | e.g. Advanced Cyber Security and Cryptology | 10 | |
| | ELECTIVE MODULE II ** | | e.g. Machine Learning and Deep Learning | 10 | |
| 4. Semester 30 ECTS | Master Thesis | MMTHE01 | Master Thesis | 27 | WAT |
| | | MMTHE02 | Colloquium | 3 | PC |
| TOTAL 120 ECTS | GOAL: In order to stay on schedule, you should finish modules of about 30 Credit Points per semester! | | | | |



You've already planned out exactly how your course schedule should look? Wonderful! The IUBH 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.



You've already planned out exactly how your course schedule should look? Wonderful! The IUBH 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.



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.



* All the modules that have been unlocked for the Online Exams can be found in CARE.

NOTE:

If the result of the recognition exam is still pending, you should not choose any courses that you have applied for.



| | |
|-------------|---|
| E | Exam (monthly at study centres or anytime via the online exam*) |
| OA | Oral Assignment |
| P | Portfolio |
| PC | Presentation: Colloquium |
| WARI | Written Assessment: Research Essay |
| WAT | Written Assessment: Thesis |
| WAW | Written Assessment: Written Assignment |
| WB | Workbook |

** Electives - Choose two modules

Elective Module I:

- Advanced Cyber Security and Cryptology
- Blockchain and Quantum Computing
- IT Governance and Service Management
- UI/UX Expert

Elective Module II:

- Data Engineer
- Business Analyst
- Technical Project Lead
- Machine Learning and Deep Learning
- Use Case Identification and Evaluation for Analytical Applications