# Information Technology (Master): Full-time Curriculum
According to the Examination Regulations of 2019 (MPO-IT-19)

| Module No. old | Module No. new | Module | Code | 1st sem. | 2nd sem. | 3rd sem. | 4th sem. | CH | CR |
|---|---|---|---|---|---|---|---|---|---|
| | | *Compulsory modules* | | | | | | | |
| 5915 | 11952 | Advanced Topics in Algorithms | ATA | 4 | | | | 4 | 5 CR |
| 5914 | 11907 | Discrete Signals and Systems | DSS | 4 | | | | 4 | 5 CR |
| 5913 | 11866 | Probability and Statistics | PAS | 4 | | | | 4 | 5 CR |
| 5916 | 11706 | Usability Engineering | UEN | 4 | | | | 4 | 5 CR |
| 5911 | 11656 | Scientific Methods and Writing | SMW | 4 | | | | 4 | 5 CR |
| 5906 | 11849 | Management Skills and Business Administration | MBA | 4 | | | | 4 | 5 CR |
| 5912 | 11763 | Innovation and Development Strategies | IDS | | 4 | | | 4 | 5 CR |
| | | Sum of compulsory subjects | | 24 | 4 | | | 28 | 35 CR |
| | | *Compulsory Optional modules* | | | | | | | |
| 5918 | 11951 | Communication for Distributed Systems [1] | CDS | | 4 | | | 4 | 5 CR |
| 5917 | 11658 | Embedded Systems Design [1] | ESD | | 4 | | | 4 | 5 CR |
| 5923 | 11780 | Industrial Software Engineering [1] | ISE | 4 | | | | 4 | 5 CR |
| 5919 | 11828 | Information Fusion [1] | IFU | | 4 | | | 4 | 5 CR |
| 5922 | 11563 | Intelligent Technical Systems [1] | ITS | | 4 | | | 4 | 5 CR |
| 5920 | 11678 | Network Security [1] | NWS | | 4 | | | 4 | 5 CR |
| 5924 | 11663 | Advanced Topics in Machine Learning [1] | AML | | 4 | | | 4 | 5 CR |
| 5928 | 11814 | Authentication [1] | AUT | | 4 | | | 4 | 5 CR |
| 5636 | 15152 | Autonomous Vehicles [1] | AUV | | 4 | | | 4 | 5 CR |
| | | N. N. [1] [2] | | | | | | 4 | 5 CR |
| | | Sum of compulsory optional subjects | | | 20 | | | 20 | 25 CR |
| 5925 | 11729 | Research Project | RES | | | x | | | 30 CR |
| -- | 11517 | Master's Thesis | MAT | | | | x | | 30 CR |
| | | Sum of CH | | 24 | 24 | | | 48 | |
| | | Sum of CR | | 30 CR | 30 CR | 30 CR | 30 CR | | 120 CR |

CR = Credits (1 CR corresponds to 30 hours)

CH = Contact hours per week (equivalent to the German abbreviation SWS for 'Semesterwochenstunden')

[1] In total, 5 out of 10 compulsory optional subjects have to be selected.

[2] Compulsory optional subject from the range of subjects offered by TH OWL or other universities, as approved by the examination board with a minimum of 4 CH, 5 CR.