Compulsory modules (51 credit points/ECTS)	**ECTS**
Applied Differential Equations	9
Optimization	9
Numerics for Partial Differential Equations	9
Optimization 2	9
Project Seminar	15
Elective Modules (choose for 39 ECTS)	
Advanced Mathematics	
Special topics of Mathematics	9
Special topics of Applied Mathematics	9
Specialization in Mathematics	9
Physics in Application - for instance	
Polymer Sciences	6
Solid State Physics	6
Processes at Material Interfaces	6
Vacuum Technology and Fundamentals of Surface Science	6
Computer based Methods - for instance	
Pattern Recognition	6
Software Language Engineering	6
Artifical Intelligence	6
Introduction to Web Science	6
Data Science	6
Big Data	6
Deep Learning	6
Machine Learning and Data Mining	6
Master thesis - Research Work (30 ECTS)	
Master Thesis	27
Oral Final Exam	3
Overall total	**120**