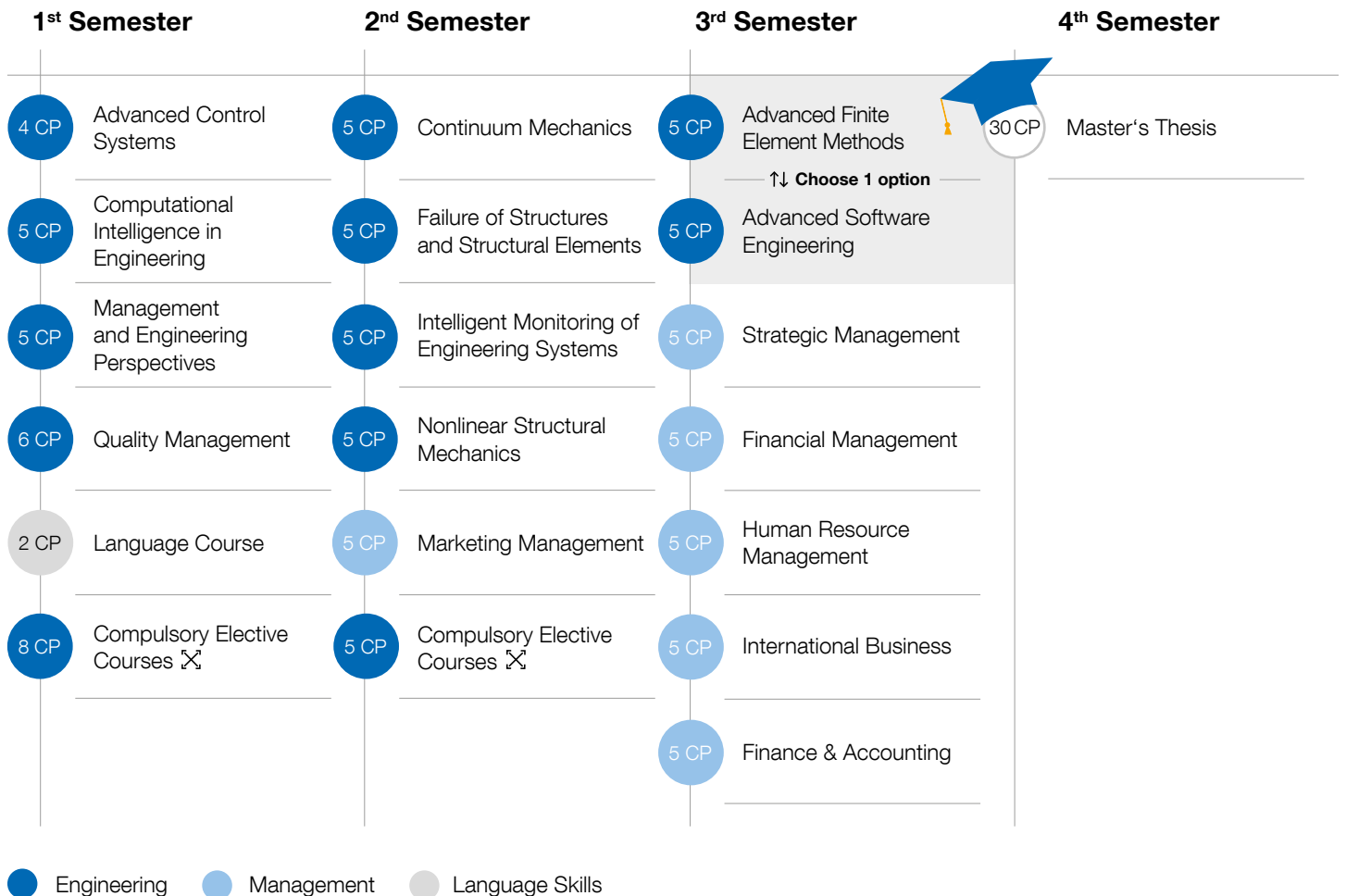# Master of Science (M.Sc.) MME-CAME I Management and Engineering in Computer Aided Mechanical Engineering

Track: Modelling and Simulation Engineering

1st Semester

- 4 CP — Advanced Control Systems
- 5 CP — Computational Intelligence in Engineering
- 5 CP — Management and Engineering Perspectives
- 6 CP — Quality Management
- 2 CP — Language Course
- 8 CP — Compulsory Elective Courses ⤬

2nd Semester

- 5 CP — Continuum Mechanics
- 5 CP — Failure of Structures and Structural Elements
- 5 CP — Intelligent Monitoring of Engineering Systems
- 5 CP — Nonlinear Structural Mechanics
- 5 CP — Marketing Management
- 5 CP — Compulsory Elective Courses ⤬

3rd Semester

- 5 CP — Advanced Finite Element Methods

↑↓ **Choose 1 option**

- 5 CP — Advanced Software Engineering
- 5 CP — Strategic Management
- 5 CP — Financial Management
- 5 CP — Human Resource Management
- 5 CP — International Business
- 5 CP — Finance & Accounting

4th Semester

- 30 CP — Master's Thesis

Legend:
- ● Engineering
- ● Management
- ● Language Skills

⤬ Compulsory Elective Courses

Winter Semester

Additive Manufacturing I – Technologies and Processes	6 CP
Artificial Neural Networks in Structural Mechanics	6 CP
Fundamentals of Lightweight Design	4 CP
Linear Control Systems	3 CP
Machine Tools	5 CP
Mechatronics and Control Techniques for Production Plants	3 CP
Modelling, Model Reduction and Simulation in Laser Processing – Applications	5 CP
Numerical Methods in Mechanical Engineering	7 CP
Tensor Algebra and Tensor Analysis for Engineering Students I	5 CP

Summer Semester

Digital Work: Challenges and Solutions	5 CP
Mechanics of Engineering Materials	5 CP
Multibody Dynamics	5 CP
Simulation of Discrete Event Systems	5 CP