

Master's programme in Mechanical Engineering Production Engineering – Example study path

The courses given by the Production engineering laboratory within the Department of Mechanical Engineering cover subjects related to manufacturing methods and production systems used in the mechanical engineering industry. For the student, they provide a wide set of skills necessary in industrial production management and academic research in the area. Studying production engineering is practical, involving laboratory exercises, projects and individual assignments. Close cooperation with the industry is common. Typical jobs for a manufacturing engineer deal with production management, production system design, production development, investments, purchasing, EDP systems, customer project management, quality, and others. The focus of the study path can be widened and moved by including courses from other theme areas offered by the Mechanical Engineering Department or from other departments of the university. Common choices are courses from the Engineering Materials, Mechatronics, and Product Development areas or from the Department of Industrial Engineering and Management or Department of Electrical Engineering and Automation.

Example study path schedule

| | 1st year | | | | | 2nd year | | | | |
|--|----------|----|-----|-----|-----|----------|----|-----|----|---|
| | I | II | III | IV | V | I | II | III | IV | V |
| Common studies, 30 cr | | | | | | | | | | |
| MEC-E1001 Mechanical Engineering in Society | x | x | | | | | | | | |
| MEC-E1003 Machine Design Project | x | x | | | | | | | | |
| MEC-E1060 Machine Design | x | | | | | | | | | |
| MEC-E1070 Selection of Engineering Materials | x | | | | | | | | | |
| MEC-E1080 Production Engineering | x | x | | | | | | | | |
| MEC-E1090 Quality Management and Metrology | | x | | | | | | | | |
| Advanced studies, 30 cr | | | | | | | | | | |
| MEC-E7001 Production Systems Modelling | | | x | | | | | | | |
| MEC-E7002 Manufacturing Methods I | | | x | x | | | | | | |
| MEC-E7003 Manufacturing Methods II | | | | x | x | | | | | |
| MEC-E7005 Advanced Casting Technology | | | | x | | | | | | |
| MEC-E7004 Industrial Project | | | (x) | (x) | (x) | x | x | | | |
| MEC-E7007 Factory Project | | | | | | x | x | | | |
| Elective studies, min. 30 cr | | | | | | | | | | |
| MEC-E5001 Mechatronic Machine Design | | | x | | | | | | | |
| MEC-E5002 Mechatronics Project | | | x | x | | | | | | |
| MEC-E6001 Engineering Metals and Alloys | | | x | | | | | | | |
| MEC-E6002 Welding Technology and Design | | | | | x | | | | | |
| MEC-E7006 Advanced Manufacturing | | | | x | | | | | | |
| TU-E2020 Advanced Operations Management | | | | | | | x | | | |
| TU-E2040 Management of External Resources | | | | | | x | | | | |
| Master's thesis, 30 cr | | | | | | | | | | |
| | | | | | | | | x | x | x |