

Construction Management and Engineering

PROFILES

| Markets & Organization of Construction | | | Digital Technologies in Construction | | |
|--|-------------|----------|--|-----------|----------|
| Profile Courses (minimum 30 EC) | EC | Quartile | Profile Courses (minimum 30 EC) | EC | Quartile |
| Research Methodology & Academic Skills (compulsory) | 7,5 | 2 | Research Methodology & Academic Skills (compulsory) | 7,5 | 2 |
| Research Methodology & Academic Skills (compulsory) (2019-2020) | 5 | any | Research Methodology & Academic Skills (compulsory) (2019-2020) | 5 | any |
| Legal & Governance Aspects | 7,5 | 1 | Legal & Governance Aspects | 7,5 | 1 |
| Planning & Process Management | 5 | 1 | Planning & Process Management | 5 | 1 |
| Sustainability and Circularity in Civil Engineering | 5 | 1 | Construction Industry Dynamics | 5 | 2 |
| Construction Industry Dynamics | 5 | 2 | Construction Process Management | 5 | 2 |
| Construction Process Management | 5 | 2 | Systems Engineering in Construction | 5 | 3 |
| Systems Engineering in Construction | 5 | 3 | Digital Technologies for Civil Engineering | 5 | 3 |
| Infrastructure Asset Management | 5 | 4 | Technology and Innovation in Road Construction | 5 | 4 |
| Profile Electives - Free to choose any of the CEM courses offered (pay attention to the required prior knowledge) - Below: list of CEM-courses that fit best in this profile (in addition to profile courses) - Below: courses from other programmes that fit in this profile (If you include courses from other programmes, we recommend you to make a selection, such that the majority of the programme is still formed by CEM-courses) | | | Profile Electives - Free to choose any of the CEM courses offered (pay attention to the required prior knowledge) - Below: list of CEM-courses that fit best in this profile (in addition to profile courses) - Below: courses from other programmes that fit in this profile (If you include courses from other programmes, we recommend you to make a selection, such that the majority of the programme is still formed by CEM-courses) | | |
| Construction Supply Chains and Digitization | 5 | 1 | Sustainability and Circularity in Civil Engineering | 5 | 1 |
| Experiments in Water Infrastructure | 5 | 2 | Construction Supply Chains and Digitization | 5 | 1 |
| Procurement Strategies and Tendering | 5 | 3 | BIM and 5D Planning | 5 | 2 |
| Infrastructure Maintenance Machines | 5 | 4 | Experiments in Water Infrastructure | 5 | 2 |
| Urban Governance and Resilience for Smarter Cities (2019-2020) | 5 | 4 | Simulation and Optimization of Construction Processes | 5 | 3 |
| Value Management | 5 | 4 | Value Management | 5 | 4 |
| Culture in Construction (2019-2020) | | | Subsurface Infrastructure Engineering | 5 | 4 |
| Innovation in Construction (2019-2020) | | | Infrastructure Maintenance Machines | 5 | 4 |
| Decision Engineering in Construction (2019-2020) | | | Infrastructure Asset Management | 5 | 4 |
| Safety by Design for Products, Equipment and Systems (IDE) | 5 | 2 | Innovation in Construction (2019-2020) | | |
| | | | Decision Engineering in Construction (2019-2020) | | |
| Governing Product development (IDE) | 5 | 1 | Safety by Design for Products, Equipment and Systems (IDE) | 5 | 2 |
| Maintenance Engineering and Management (ME) | 5 | 1 | Governing Product development (IDE) | 5 | 1 |
| Product Life Cycle (IDE) | 5 | 2 | Maintenance Engineering and Management (ME) | 5 | 1 |
| Scenario based product design (IDE) | 5 | 2 | Product Life Cycle (IDE) | 5 | 2 |
| Cost Management and Engineering (IEM) | 5 | 2 | Scenario based product design (IDE) | 5 | 2 |
| Product Life Cycle Management (IDE) | 5 | 3 | Cost Management and Engineering (IEM) | 5 | 2 |
| Advanced Inventory management (before: Reliability Engineering and Maintenance Management) (IEM) | 5 | 2 | Product Life Cycle Management (IDE) | 5 | 3 |
| Design for Maintenance Operations (IDE) | 5 | 3 | Advanced Inventory management (before: Reliability Engineering and Maintenance Management) (IEM) | 5 | 2 |
| Advanced 3D Modelling (IDE) | 5 | 3 | Design for Maintenance Operations (IDE) | 5 | 3 |
| Virtual Reality (IDE) | 5 | 4 | Advanced 3D Modelling (IDE) | 5 | 3 |
| LEAN Six-Sigma Green Belt (ME) | 5 | 4 | Virtual Reality (IDE) | 5 | 4 |
| | | | LEAN Six-Sigma Green Belt (ME) | 5 | 4 |
| GENERAL COURSES | | | | | |
| Free Electives (max 15 EC) | EC | Quartile | Free Electives (max 15 EC) | EC | Quartile |
| Any course from UT or approved other university* | | | Any course from UT or approved other university* | | |
| Thesis ** | EC | Quartile | Thesis ** | EC | Quartile |
| Preparation Master Thesis | 5 - 10 (EC) | - | Preparation Master Thesis | 5-10 (EC) | |
| Master Thesis Construction | 30 | - | Master Thesis Construction | 30 | - |

PLANNING AND CONSULTATION FOR THE MASTER PROFILES

Track-coordinator: drs. ing. Hans Boes
Coordinator Master Theses: dr. ir. Robin de Graaf