

## 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
<b>Profile Electives</b> - 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)			<b>Profile Electives</b> - 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
<b>GENERAL COURSES</b>					
<b>Free Electives (max 15 EC)</b>			<b>Free Electives (max 15 EC)</b>		
Any course from UT or approved other university*	EC	Quartile	Any course from UT or approved other university*	EC	Quartile
<b>Thesis **</b>			<b>Thesis **</b>		
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