

Course code	Course name	ECTS	Language	Compulsory?	Education periods	Academic year 1				Academic year 2					
						Semester 1 Edu. Per. 1	Semester 1 Edu. Per. 2	Semester 2 Edu. Per. 3	Semester 2 Edu. Per. 4	Semester 3 Edu. Per. 1	Semester 3 Edu. Per. 2	Semester 4 Edu. Per. 3	Semester 4 Edu. Per. 4		
CIE5030	MSc Thesis CoMEM	30	EN	Y	1, 2, 3, 4, 5										
CIE5060-09	MSc Thesis	40	EN	Y	1, 2, 3, 4, 5										
<b>Ethics courses, choose one out of 5</b>															
WM0312CIE	Philosophy, Technology Assessment and Ethics for CT	4	EN	N	4										
CIE4510-20	Climate Change: Science & Ethics	4	EN	N	2										
WM1302TU	Ethics of Transportation	5	EN	N	3										
WM0376TU	Ethics of Technological Risks	5	EN	N	3										
TPM003A	Water Ethics	5	EN	N	4										
<b>Electives, choose one out of 3</b>															
CIE4040-09	Internship	10	EN	N	1, 2, 3, 4, 5										
CIE4061-09	Multidisciplinary Project, Civil Engineering Consultancy Project	10	EN	N	1, 2, 3, 4, 5										
CIE5050-09	Additional Graduation Work, Research Project	10	EN	N	1, 2, 3, 4, 5										
<b>CEG general elective courses for all tracks</b>															
CIE4381	Engineering Asset Management	4	EN	N	1										
CIE4391	Quantitative Asset Modelling	4	EN	N	4										
CIE4420	Principles of Geohydrology	4	EN	N	3										
<b>Deficiency course voor WO (zij)instromers</b>															
CTB2001WO-20	Computer Programmeren WO-instromers	2	EN	N	1, 2										
<b>MSc Honours Programme</b>															
CIEAEM4010	Honours Programme MSc Research project	10	EN	N	1, 2, 3, 4										
CIEAEM4015	Honours Programme MSc Research project	15	EN	N	1, 2, 3, 4										

<b>MSc CE, track Structural Engineering</b>															
<b>Compulsory courses (adding up to 32 EC)</b>															
CIE4100	Materials and Ecological Engineering	4	EN	Y	2										
CIE4110	Timber Structures and Wood Technology	4	EN	Y	1										
CIE4115	Steel Structures 2	4	EN	Y	1										
CIE4121	Steel Structures 3	4	EN	Y	3										
CIE4140	Structural Dynamics	4	EN	Y	3										
CIE4160	Prestressed Concrete	4	EN	Y	1										
CIE4180	Plates and Slabs	4	EN	Y	2										
CIE4190	Analysis of Slender Structures	4	EN	Y	1										
<b>Additional block Structural Mechanics (adding up to 24 EC)</b>															
CIE4130	Probabilistic Design and Risk Management	4	EN	Y	2										
CIE4143	Shell Analysis, Theory and Application	4	EN	Y	4										
CIE4150	Plastic Analysis of Structures	4	EN	Y	3										
CIE5123	Introduction to the Finite Element Method	4	EN	Y	3										
CIE5145	Random Vibrations	4	EN	Y	4										
CIE5148	Computational Modelling of Structures	4	EN	Y	1										
<b>Additional block Concrete Structures (adding up to 24 EC)</b>															
CIE4170	Construction Technology of Civil Engineering Structures	4	EN	Y	4										
CIE4281	Building Structures 2	4	EN	Y	2										
CIE5110	Concrete - Science and Technology	4	EN	Y	2										
CIE5127	Concrete Bridges	4	EN	Y	3										
CIE5130	Capita Selecta Concrete Structures	4	EN	Y	4										
CIE5148	Computational Modelling of Structures	4	EN	Y	1										
<b>Additional block Steel and Timber Construction (adding up to 24 EC)</b>															
CIE4125	Structural Design – Case Study Steel, Timber of FRP	3	EN	Y	1, 2, 3, 4										
CIE5122	Capita Selecta Steel and Aluminium Structures	4	EN	Y	2										
CIE5124	Biosbased Structures and Materials	4	EN	Y	4										
CIE5125	Steel Bridges	4	EN	Y	4										
CIE5126-20	Fatigue	3	EN	Y	3										
CIE5128	Fibre-Reinforced Polymer (FRP) Structures	3	EN	Y	1										
CIE5131	Fire Safety Design	3	EN	Y	3										
<b>Additional block Materials and Environment (adding up to 24 EC)</b>															
CIE4030	Methodology for Scientific Research	3	EN	Y	4										
CIE4240-19	Forensic Structural Engineering	3	EN	Y	1										
CIE5100	Repair and Maintenance of Construction Materials	4	EN	Y	3										
CIE5102	Forensic Building Materials Engineering	3	EN	Y	4										
CIE5110	Concrete - Science and Technology	4	EN	Y	2										
CIE5130	Capita Selecta Concrete Structures	4	EN	Y	4										
CIE5146	Micromechanics and Computational Modelling of Building Materials	3	EN	Y	3										
<b>Additional block Road and Railway Engineering (adding up to 24 EC)</b>															
CIE4860	Structural Pavement Design	6	EN	Y	4										
CIE4870	Structural Design of Railway Track	4	EN	Y	3										
CIE4880	Road Paving Materials incl. Laboratory Experiment	7	EN	Y	2, 3										
CIE5850	Production, Construction and Maintenance of Asphalt Concrete Pavements	3	EN	Y	1										
CIE5871	Capita Selecta Railway and Road Structures	4	EN	Y	4										
<b>Additional block Hydraulic Structures (adding up to 24 EC)</b>															
CIE3310-09 (niet als C)	Open Channel Flow	4	EN	Y	3										
CIE3330 (niet als C)	Hydraulic Structures 1	4	EN	Y	3										
CIE4130	Probabilistic Design and Risk Management	4	EN	Y	2										
CIE4170	Construction Technology of Civil Engineering Structures	4	EN	Y	4										
CIE4310	Bed, Bank and Shore Protection	4	EN	Y	2										
CIE4345	River Dynamics 1	4	EN	Y	1										
CIE4305	Coastal Dynamics 1	6	EN	Y	3										
CIE4325	Ocean Waves	6	EN	Y	1										
CIE5304	Waterpower Engineering	3	EN	N	4										
CIE5310	Probabilistic Design in Hydraulic Engineering	3	EN	Y	4										
CIE5313-18	Hydraulic Structures 2	3	EN	Y	4										
CIE5314-19	Flood Defenses	4	EN	Y	4										
CIE3150 (niet als C)	Concrete Structures 2	4	EN	Y	3										
<b>Electives</b>															
CIE3109-09 (niet als C)	Structural Mechanics 4	4	EN	N	3										
CIE4120	Information Systems for the Construction Industry	4	EN	N	3										
CIE4145-09 (for foreign students only)/r required by intake	Dynamics and Introduction to Continuum Mechanics	4	EN	N	1, 2										
CIE4481	System Engineering Management	4	EN	N	3										
CIE4871	Design and Maintenance of Railway Vehicles	4	EN	N	4										
CIE4873	Wheel-Rail Interface	4	EN	N	4										
CIE4874	Elements of Railway Engineering	4	EN	N	2										
CIE5142	Computational Methods in Non-linear Solid Mechanics	3	EN	N	1										
CIE5144	Stability of Structures	3	EN	N	4										
CIE5260	Structural Response to Earthquakes	4	EN	N	1										
CIE5874	Life-Cycle Performance by Design of Railway Assets	4	EN	N	1										
CIE5875	Railway Asset Management	4	EN	N	1										

<b>Legenda</b>	
	Scheduling in year 1 / year 2 and EC