Curriculum CEM/CME 2025-2026

	Construction Management & Engineering	Transport Engineering & Management	Water, River and Coastal Engineering and Management	Sustainability & Resilience	Hydraulic & Geo-Structures
	Specialisation Courses (≥50 EC)	**Specialisation Courses (≥50 EC)**	**Specialisation Courses (≥50 EC)**	**Specialisation Courses (≥50 EC)**	**Specialisation Courses (≥50 EC)**
Q1	Building Information Modelling (BIM) Construction Supply Chains and Digitization Planning & Process Management Structural Health Monitoring for Smart Infrastructure Legal & Governance Aspects Civil Engineering Challenges*	Planning & Process Management Transport Demand Modelling Simulation (IEM) Civil Engineering Challenges*	River Flow Processes Hydrology Long Waves & Tidal Morphodynamics Water Footprint Assessment Water Quality Civil Engineering Challenges*	Sustainable Engineering Planning & Process Management Construction Supply Chains and Digitization Legal & Governance Aspects Water Footprint Assessment Civil Engineering Challenges*	Structural Health Monitoring for Smart Infrastructure Hydrology Building Information Modelling (BIM) Sustainable Engineering Structural Dynamics (ME) Civil Engineering Challenges*
Q2	Digital Twinning in Infrastructure Circular Design & Deconstruction Culture in International Construction Transitions in Civil Engineering*	Traffic Safety Public Transport Modelling Rail Transport Sustainable Transport	Wave-Dominated Coastal Systems Hydrological Modelling and Forecasting Data Analysis in Water Engineering and Management Morphology*	Circular Design & Deconstruction Sustainable Transport Transitions in Civil Engineering*	Geo Risk Assessment Digital Twinning in Infrastructure Data Analysis in Water Engineering & Management
Q3	Urban Resilience in a Changing Climate Value Management Construction Project & Programme Management Machine Learning Applications in Civil Engineering	Traffic Operations Traffic Management Machine Learning Applications in Civil Engineering Urban Resilience in a Changing Climate Transportation & Logistic Management (IEM)	Mathematical Physics of Water Systems Hydraulic Engineering Hydraulic Modelling Integrated Water Management Machine Learning Applications in Civil Engineering	Urban Resilience in a Changing Climate Integrated Water Management Construction Project & Programme Management Machine Learning Applications in Civil Engineering	Geotechnical Modelling Hydraulic Engineering Mathematical Physics of Water Systems Machine Learning Applications in Civil Engineering
Q4	Infrastructure Asset Management Sustainable Transportation Infrastructure Subsurface Infrastructure Engineering & Data Management Value Driven Procurement & Organising	Smart Mobility Mathematical Optimization in Transport Land Use and Transport Interactions Sustainable Transportation Infrastructure	Building with Nature Water and Climate River Morphodynamics	Land Use and Transport Interactions Water and Climate Building with Nature	Subsurface Infrastructure Engineering & Data Management Mathematical Optimization in Transport Building with Nature
	CEM Elective Courses (≥15 EC)	**CEM Elective Courses (≥15 EC)**	**CEM Elective Courses (≥15 EC)**	**CEM Elective Courses (≥15 EC)**	**CEM Elective Courses (≥15 EC)**
	Specialisation course or any other course from CEM (pay attention to the required prior knowledge)	Specialisation course or any other course from CEM (pay attention to the required prior knowledge)	Specialisation course or any other course from CEM (pay attention to the required prior knowledge)	Specialisation course or any other course from CEM (pay attention to the required prior knowledge)	Specialisation course or any other course from CEM (pay attention to the required prior knowledge)
	Free Electives (max 15 EC)	**Free Electives (max 15 EC)**	**Free Electives (max 15 EC)**	**Free Electives (max 15 EC)**	**Free Electives (max 15 EC)**
	Specialisation course or any other course from CEM, UT or approved other university** *If you want to take a course outside CEM it is recommended to talk to the Specialisation-coordinator.*	Specialisation course or any other course from CEM, UT or approved other university** *If you want to take a course outside CEM it is recommended to talk to the Specialisation-coordinator.*	Specialisation course or any other course from CEM, UT or approved other university** *If you want to take a course outside CEM it is recommended to talk to the Specialisation-coordinator.*	Specialisation course or any other course from CEM, UT or approved other university** *If you want to take a course outside CEM it is recommended to talk to the Specialisation-coordinator.*	Specialisation course or any other course from CEM, UT or approved other university** *If you want to take a course outside CEM it is recommended to talk to the Specialisation-coordinator.*
	Other usefull courses (0 EC)	**Other usefull courses (0 EC)**	**Other usefull courses (0 EC)**	**Other usefull courses (0 EC)**	**Other usefull courses (0 EC)**
	Boost your Competences	Boost your Competences	Boost your Competences	Boost your Competences	Boost your Competences
	GRADUATION *	**GRADUATION ***	**GRADUATION ***	**GRADUATION ***	**GRADUATION ***
	Academic Research Skills in CEM/CME (Q2 and Q4, 5 EC) Preparation Master Thesis (5 EC) Master Thesis Construction (30 EC)	Academic Research Skills in CEM/CME (Q2 and Q4, 5 EC) Preparation Master Thesis (5 EC) Master Thesis Traffic & Transport (30 EC)	Academic Research Skills in CEM/CME (Q2 and Q4, 5 EC) Preparation Master Thesis (5 EC) Master Thesis Water (30 EC)	Academic Research Skills in CEM/CME (Q2 and Q4, 5 EC) Preparation Master Thesis (5 EC) Master Thesis Sustainability & Resilience (30 EC)	Academic Research Skills in CEM/CME (Q2 and Q4, 5 EC) Preparation Master Thesis (5 EC) Master Thesis Hydraulic and Geo-Structures (30 EC)
	PLANNING AND CONSULTATION	**PLANNING AND CONSULTATION**	**PLANNING AND CONSULTATION**	**PLANNING AND CONSULTATION**	**PLANNING AND CONSULTATION**
	Specialisation-coordinator: Dr.ir. Ruth Sloot Coordinator Master Thesis: Dr.ir. Robin de Graaf	Specialisation-coordinator: Prof.dr.ir. Eric van Berkum Coordinator Master Thesis: Dr.ir. Baran Ulak	Specialisation-coordinator: Dr.ir. Bas Borsje Coordinator Master Thesis: Dr.ir. Martijn Booij	Specialisation-coordinator: Dr.ir. Joanne Vinke-de Kruijf Coordinator Master Thesis: Dr.ir. Lara Wohler	Specialisation-coordinator: Dr.ir. Jord Warmink Coordinator Master Thesis: Dr. Floriana Anselmucci

* Courses that require more prior knowledge and experience, preferably taken in the second year

** an "*approved university* " is any university in The Netherlands (not HBO-schools), or any international university that is partner of the UT or of the faculty of ET.

The Free Electives should be at MSc-level and should have no overlap with other courses in your programme. For courses from other universities, contact your specialisation-coordinator.

*** Click here for the procedure of how to start the course Preparation MSc-thesis and your MSc-thesis project