



Course offer

Civil Engineering

2022-2023

CIVIL ENGINEERING

Are you interested in contributing to the construction of the largest lock project in the world? In determining how high and how strong dikes should be to ensure flooding does not take place? Or would you like to make sure that people and animals can continue to live safely near coasts and rivers despite climate change? If your answer is 'yes' to the questions above, the Civil Engineering programme at HZ may be the right choice for you!

It is expected that by 2050 80% of the world's population will live in delta areas. In these areas, where rivers meet the sea, there are increasing challenges due to climate change. With your expertise as a civil engineer, you will tackle problems such as coastal safety and urban flooding and contribute to safety in deltas around the world. During your study, you learn everything about the design and building of large constructions and managing huge international projects. Examples include the Panama locks in the Panama Canal; the Channel tunnel that connects the United Kingdom with France; and the magnificent Palm Islands in Dubai, a design that could have been yours if you were already a civil engineer! Doing Civil Engineering at HZ means you are studying in the middle of a delta area: when walking out of the university of applied sciences, you will encounter your field of work all around you.

The Civil Engineering programme focuses upon nine competences, divided in two typologies: six technical competences refer to the so-called design, creation and maintenance process, where the generic HBO skills are important in each stage. This concerns the competences of (1) Initiating and controlling, (2) Design, (3) Specifying, (4) Realizing, (5) Management and (6) Monitoring, testing and evaluating. The generic HBO competencies are (7) Research, (8) Communication and collaboration and (9) Management and innovation.

The Civil Engineering programme offers a variety of subjects of specialization, related to the focus areas: (1) Spatial planning and design, (2) Water, soil and environment, (3) Infrastructure and mobility (4) Construction and engineering.

COURSE OFFER 2022-2023

During your Civil Engineering studies at HZ you have to choose **one study package** among the ones offered by the programme. This means that you cannot choose courses belonging to different packages. Each package allows you to achieve 30 ECTs.

The full description of the courses can be found [here](#).

COURSE OFFER CIVIL ENGINEERING - FALL SEMESTER

Study package name	Study year	Quarter	Course code	Course name	ECTs
Exploring Civil Engineering	1	1	CU20596V1	Introduction to Civil Engineering	2,5
		1	CU79090V1	Construction Materials 1	2,5
		1	CU20598V1	Mathematics & Physics	2,5
		1	CU20600V1	Fluid Mechanics 1	2,5
		1	CU26000V2	Project & Professional Skills 1	5,0
		2	CU20604V1	Fluid Mechanics 2	2,5
		2	CU79091V1	Construction Materials 2	2,5
		2	CU20602V1	Mathematics 1	2,5
		2	CU20603V3	Project & Professional Skills 2	5,0
		2	CU04206V14	Academic reading for Delta	2,5
Inland Infrastructure Development	2	1	CU23856	Transport Infrastructure 1	2,5
		1	CU23857	Structural Engineering 1	2,5
		1	CU23875	Environmental Engineering	2,5
		1	CU23859	Foundations 1	2,5
		1	CU206001	HZ personality CE 1	1,25
		1	CU23860V2	Project & Professional Skills 5	3,75
		2	CU23861	Transport Infrastructure 2	2,5
		2	CU23874	Structural Engineering 2	2,5
		2	CU23858	Rural Water Management	2,5
		2	CU23876	Foundations 2	2,5
		2	CU206002	HZ personality CE 2	1,25
		2	CU23877V3	Project & Professional Skills 6	3,75
4 th year package	4	1+2	CU79085V1	Integrated Coastal challenge	10
		1+2	CU79087V1	Urban water management	10
		1+2	CU79086V1	Advanced construction engineering	10

COURSE OFFER CIVIL ENGINEERING - SPRING SEMESTER

Study package name	Study year	Quarter	Course code	Course name	ECTs
Sustainability and circularity in civil engineering	1	3	VCCU06284	HZ personality CE 0	1,25
		3	VCCU06283V6	VCA	1,25
		3	CU20605V1	Soil Mechanics 1	2,5
		3	CU20613V1	Mathematics 2	2,5
		3	CU79092V1	Applied Mechanics 1	2,5
		3	CU20607V4	Project & Professional Skills 3	5,0
		4	CU20608V1	Hydrology	2,5
		4	CU20609V1	Soil Mechanics 2	2,5
		4	CU79093V1	Applied Mechanics 2	2,5
		4	CU20612V4	Project & Professional Skills 4	5,0
		4	CU04207V10	Argument writing and persuasive loop presentation	2,5
Coastal Zone Development	2	3	CU23878	Coastal Engineering 1	2,5
		3	CU23879	Structural Engineering 3	2,5
		3	CU23880	Water supply and Sanitation	2,5
		3	CU23881	Project Management 1	2,5
		3	CU206003	HZ personality CE 3	1,25
		3	CU23882V2	Project & Professional Skills 7	3,75
		4	CU23883	Coastal Engineering 2	2,5
		4	CU79094V1	Applied Mechanics 3	2,5
		4	CU23885	Dredging and Ecology	2,5
		4	CU23886V1	Project Management 2	2,5
		4	CU206004	HZ personality CE 4	1,25
4	CU23887V3	Project & Professional Skills 8	3,75		