

## Programme

### Qualification awarded

Bachelor of Science

### Length of the programme

48 months

### ECTS credits

240

### Level of qualification

Bachelor

### Mode

Full-time

### Language

Dutch, with parts in English

### School

Institute of Future  
Environments

### Locations

Groningen

## Built Environment, major Civil Engineering

### Profile of the programme

The Civil Engineering major centres around infrastructure in yet-to-be-built and built sea, land, coastal and freshwater environments. 'Infrastructure' should here be taken to include roads, railways and waterways. In addition to coastal structures aimed at protecting existing land, we will also explore technical methods used to reclaim land in the delta area. We will design artificial structures such as bridges, viaducts, sluices and ports. The Civil Engineering major focuses heavily on the aspects of technology and construction. Thorough knowledge of technology, construction, sustainability, water and soil is sorely needed in the professional practice. Among other skills, students will learn how to create the necessary designs and calculations for these infrastructure works. Over the course of the work placement, students will explore suitable professional roles. Students will discover how to combine coastal defences with recreation and tourism functions, or learn how to create a 'smart' dyke.

### Learning outcomes

- Initiating and managing** Using a 'helicopter view' and a wide market orientation, students detect and survey tasks and potential and projects for society. Students are able to formulate preconditions, requirements and goals. Students are able to describe, monitor and manage the process.
- Designing** The design can be a plan, model or advice, as well as a spatial or technological design. Students make the design based on a set programme of requirements, research various solutions and variants, and make a balanced choice.
- Specifying** Students make a specification related to the formulation of ambitions, preconditions and feasibilities, so the product can be steered. In accordance with the requirements set, students further elaborate a design. These requirements are specific to the professional group and encompass the quality requirements of the product to be submitted.
- Realising** Students execute a design by preparing, maintaining, monitoring and steering its realisation.
- Managing** Students create a management and maintenance plan in order to safeguard the realised quality levels.
- Monitoring, testing and evaluating** Student are able to monitor and assess the submitted results objectively. In addition, students are able to make and implement adjustments as well as proposals for improvement.
- Researching** Students are able to analyse an issue and identify a research question. Students are able to set up and conduct practice-based research.
- Communicating and collaborating** Students are able to transfer relevant professional knowledge to the field, colleagues and potential target groups (customers, clients, stakeholders). Students are able to communicate with internal and external parties in a manner suited to the target audience. 'Communication' here covers the entire spectrum across which information is received, conveyed and shared. Students are focused on collaboration and constructive harmonisation with stakeholders and target groups.
- Managing and innovating** Students steer and manage processes in order to achieve the set objectives. Students are self-directing and capable of reflecting on their own performance. Students are proactive, take the initiative, and are able to think and work outside of existing frameworks.

## Programme

### Built Environment, major Civil Engineering

credits

Year 1, Propedeutic year	60
▫ BVVP15OCC - Occupation	15
▫ BVVP15NET - Networks	15
▫ BVVP15OND - Subsurface	15
▫ BVVP15INT - Integration	15
Year 2, major Civil Engineering	60
▫ semester 1 block 1	15
▫ T&C Technics & Construction 2.1	12
▫ BVVH19TCWD1 - T&C Water and Delta 1	3
▫ BVVH16TCWEG - T&C Road Engineering	3
▫ BVVH21TCCONSTR1 - T&C Applied Mechanics 1	3
▫ BVVH16TCGROND - T&C Soil mechanics and sheet wall design	3
▫ P&E People & Environment 2.1	3
▫ BVVH16MOTRANS1 - M&E Society in Transition 1	3
▫ semester 1 block 2	15
▫ T&C Technics & Construction 2.2	12

▫ BVVH18TCKLIM - T&C Urban Climate adaptation	3
▫ BVVH19TCWD2 - T&C Water and Delta 2	3
▫ BVVH16TCCONSTR2 - T&C Applied Mechanics 2	3
▫ BVVH16TCSTBET - T&C Steelstructures and reinforced concrete	3
▫ P&E People & Environment 2.2	3
▫ BVVH16MOBBR1 - M&E Policy and Regulations for Planning and Building 1	3
▫ semester 2 work placement	30
▫ BVVH20BWP1 - Defining IWP	5
▫ BVVH20BWP2 - IWP Work placement	15
▫ BVVH20BWP3 - IWP Relection and report	10
Year 3, minors	60
▫ semester 1 or 2, minor typical to major <i>one of following courses</i>	30
▫ Minor Structural Engineering <i>electives</i>	30
▫ Minor Delta Engineering <i>electives</i>	30
▫ semester 1 or 2, minor by choice <i>electives</i>	30
Year 4, Graduation	60
▫ BVVH21AFSTAGE - Internship Final Thesis	30
▫ BVVH21AFONDZ - Final Thesis	30

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