

## Works in and around the Area and Infrastructure (E715027)

Course size (nominal values; actual values may depend on programme)

Credits 3.0 Study time 90 h Contact hrs 24.0 h

Course offerings and teaching methods in academic year 2018-2019

A (semester 1)	Dutch	seminar: coached	4.0 h
		exercises	4.0 h
		excursion	4.0 h
		lecture	16.0 h

Lecturers in academic year 2018-2019

Witters, Hilde TW14 lecturer-in-charge

Offered in the following programmes in 2018-2019

	crdts	offering
<a href="#">Master of Science in Civil Engineering Technology</a>	3	A
<a href="#">Master of Science in Land Survey Engineering Technology</a>	3	A

Teaching languages

Dutch

Keywords

Design - concept - vision infrastructure - housing estate - engineering - road infrastructure, allocation of parcels, sewage, dynamical simulation of sewage.

Position of the course

This course is taught in the Master Construction and in the Master Surveying. This course is an introductory course and aims to provide to the students an overview of the conceptual, technical, spatial and legal framework within which roads, paths, roundabouts, infrastructure are designed. The course also aims to enable students to perform calculations of sewer systems with attention to environmental aspects.

Contents

**Legal framework:** spatial planning and urban regulations - history - spatial structure plans - spatial implementation plans - residential expansion areas - procedures for subdivision applications and execution of engineering works (roads and infrastructure)

**Conceptual framework:** vision and development of a concept from an urban point of view, taking into account space, environment, environment and technology.

**Technical framework:**

- Design rules for the allocation of parcels
- Concept, calculation and execution of sewerage networks - water treatment.
- Study of the general sewer plan on municipal or city level.

Initial competences

Fluid Dynamics. Knowledge of road technology and design.

Final competences

- 1 To be able to explain various concepts with respect to space, spatial structure and spatial quality and be able to indicate the various steps in the evolution of the spatial planning taking into account the current regulations.
- 2 Be able to describe and apply the old and new spatial implementation and structure plans. Be able to explain the history, background and principles of spatial planning. Be able to describe the different levels and parts of the spatial planning.
- 3 Be able to develop a concept on allocation of parcels, roads, infrastructure, taking into account the vision and regulations of the Flemish Community.
- 4 To be able to explain and apply the regulations of the water policy. To be able to distinguish and describe different types of sewage and infiltration resources.

- 5 To be able to design and calculate a sewage system. To be able to distinguish different sewage systems and their properties and components.
- 6 To be able to explain the different steps in a dynamic simulation of a sewage.
- 7 To be able to explain the different steps in a water treatment installation.

#### Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

#### Conditions for exam contract

This course unit cannot be taken via an exam contract

#### Teaching methods

Excursion, lecture, seminar: coached exercises

#### Extra information on the teaching methods

Lecture.

Seminar: company visit related to water treatment and sewers.

Seminar about parcelling and dynamic simulation of sewerd.

#### Learning materials and price

#### References

#### Course content-related study coaching

The instructor is available to clarify the course.

#### Evaluation methods

end-of-term evaluation

#### Examination methods in case of periodic evaluation during the first examination period

Written examination

#### Examination methods in case of periodic evaluation during the second examination period

Written examination

#### Examination methods in case of permanent evaluation

#### Possibilities of retake in case of permanent evaluation

not applicable

#### Calculation of the examination mark

End-of-term evaluation: Written examination :100%