

## Design Tools (E610051)

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

Credits 4.0 Study time 120 h Contact hrs 48.0 h

Course offerings and teaching methods in academic year 2018-2019

A (semester 1) Dutch seminar 48.0 h

Lecturers in academic year 2018-2019

Parmentier, Davy TW18 staff member  
Rysman, Olivier TW18 lecturer-in-charge

Offered in the following programmes in 2018-2019

	crdts	offering
<a href="#">Bachelor of Science in Engineering Technology (main subject Electromechanical Engineering Technology)</a>	4	A
<a href="#">Bachelor of Science in Engineering Technology (main subject Electronics and ICT Engineering Technology)</a>	4	A
<a href="#">Joint Section Bachelor of Science in Engineering Technology</a>	4	A
<a href="#">Bachelor of Science in Industrial Design Engineering Technology</a>	4	A

Teaching languages

Dutch

Keywords

Autocad, Siemens NX, projection systems, parametric 3D CAD, assembly modelling, technical drawings, Drawing conventions, house, construction, fundamentals, supporting floor, cavity wall, sloping roof, floor plan.

Position of the course

This is an introductory course aimed at providing the students with insights in:

- planned buildup and elaboration of a building using Autocad Software
- creating a mechanical construction drawing using Siemens NX software

Contents

- Technical drawing standards and reading of drawings
- Skills in using CAD software:
- Application of Autocad for drawing floor plans and details of a given construction drawing of a house.
- Learn how to put the technical product information regarding form, function, dimensions and production of a part and assembly of parts onto technical drawings. The student will learn to draw by hand, build a 3D CAD model, construct assemblies and derive and finish a 2D or assembly drawing from that model.

Initial competences

Final Competences of secondary school.

Final competences

- Is able to read and compose technical drawings
- Is able to create a technical drawing using technical hand drawing and Siemens NX
- Is able to create a building plan using technical hand drawing and Autocad

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

Guided self-study, seminar

## Extra information on the teaching methods

Practical classes, guided selfstudy

## Learning materials and price

- Own laptop is obliged
- Autocad tutorials (software can be downloaded for free from students.autodesk.com)
- Siemens NX tutorials (software is provided free of charge)
- Book 'Van De Wiele: Vaktekenen en tekeninglezen leerboek 1', ISBN 9789030154853

## References

- NX for designers: S. Tickoo / Schererville: Cadcim Technologies, 2010
- Producttekenen en -documenteren van 3D naar 2D: A. Breedveld, Academic Service, 2004

## Course content-related study coaching

Support available during the practical classes and by appointment

## Evaluation methods

continuous assessment

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

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

Examination methods in case of permanent evaluation

Skills test

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible

## Extra information on the examination methods

A skills test is used as evaluation. The student demonstrates his capabilities in using the software during a time-limited assessment.

## Calculation of the examination mark

To determine the final score the following distribution is used:

Autocad 2D : 50%

Siemens NX 3D : 50%

The evaluation and final score is the mathematical average of the two coefficients.

When a student doesn't participate to one of more parts of the evaluation or has less than 8/20 for one of these parts the student cannot pass for this course. When the final score would still be 10 or more on 20, it will be reduced to the highest 'fail' score (9/20)