

Master Program Structural Engineering and Design

Faas Moonen

Structural design focuses on:

The knowledge and application of

(1) structural materials,

(2) optimizing design and construction

(3) methods to solve mechanical problems.



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(1) structural materials,

(2) optimizing **design** and construction

(3) methods to solve *mechanical* problems.

Structural design prepares for:

A profession as **structural engineer**, **researcher** or **construction manager**.

Courses SD

Core courses:	25 ECTS
Specialization courses:	<i>30 ECTS</i>
Free electives:	20 ECTS
Graduation project:	45 ECTS

Total:

Core Courses SD

- Advanced *steel* and *aluminium* structures
- Advanced concrete structures
- *Resource efficient* structural design
- *finite elements* method 1 energy methods and linear simulations
- Stability of structures

5 COURSES – 5 ECTS (25 IN TOTAL)

Specialization courses (1)

- Design project high rise buildings (10 ects)
- Design project: Large span structures (10 ects)
- Research projects (10 ects)
- Geotechnics, soil mechanics + seismic design (5 ects)
- Structural design: Capita Selecta (safety/research) (5 ects)

Specialization courses (2)

- Structural design with glass (2.5 ects)
- Digital design & manufacturing (2.5 ects)
- Advanced Timber structures (5 ects)
- Finite element method 2, non-linear and multiscale simulations (5 ects)

9 COURSES – 55 ECTS in total (pick 30 ects)

Workshop

- Structural laboratory
- Internationally recognized for research on large structures

Subject

- 3D Printed
- Steel
- Glass
- Masonry
- Timber
- Aluminium
- Large structures
- Adaptive structures
- And many others...

Master thesis Example: Research

Student: Lars Croes

Master project *Example:* Research

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Student: Jelle Versteege

Stadium, structure based on the Geiger cable dome principle (Tensegrity structure)

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Student: Marc Nijenhuis

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Student: Derk Bos

Double track: SED + AUDE

