

Civil Engineering Building Engineering

MSc Programme



Creating a building is a true adventure. Developing and realising what you have in mind by connecting technology to an innovative design; meeting the challenge of finding the right materials, coming up with the right solutions within the goals set and proving the reliability of the structure. This is what the Building Engineering track offers you.

Degree	Master of Science
Starts	September
Type	full-time
Credits	120 ECTS, 24 months
Language	English
Application deadline	1 April: International students 1 July: Dutch degree
Tuition fee	€ 18.750 (non EU) € 2.168 (EU)
Scholarships	scholarships.tudelft.nl

Programme

The MSc track Building Engineering offers a varied and broad programme that deals with every aspect of building engineering over the lifespan of a building. As a civil engineer, you need a broad range of knowledge in order to be able to make a valuable contribution to the design and construction of building structures. That is why this track covers the whole building process; from the planning phase up to the realisation of a building. We also consider the options for the reuse of buildings. Sustainability is inextricably linked to construction and the times in which we live. We, therefore, must take it into account. Because the aesthetic aspects

of buildings are becoming more and more important too due to their visual impact on our habitat, architectural design is becoming increasingly important. But a beautiful building still needs a sound structure.

Specialisation

The Building Engineering track offers one specialisation.

Structural Design has emerged in response to modern-day building developments. Increasingly, the design phase of buildings involves not only structural experts and architects, but also structural designers. These

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FIRST YEAR	SECOND YEAR
TRACK-SPECIFIC COURSES (TOTAL OF 56 EC)	TRACK-SPECIFIC COURSES: AR0026 MEGA (12EC)
COMPULSORY ETHICS COURSE (CHOOSE ONE OF:) • CLIMATE CHANGE: SCIENCE & ETHICS (4 EC) • PHILOSOPHY, TECHNOLOGY ASSESSMENT AND ETHICS FOR CIVIL ENGINEERS (4 EC)	SPECIAL SUBJECTS (CHOOSE ONE OF:) • ADDITIONAL GRADUATION WORK / RESEARCH PROJECT (10 EC) • ELECTIVE COURSES (10 EC) • INTERNSHIP (10 EC)
	MSC THESIS (40 EC)

'designing engineers' act as a bridge between architects and the structural experts who focus on verification of standards, dimensioning and detailing. The approach is based on the principles of mechanics and knowledge of materials.

If you are following the track of Building Engineering and want to deepen your knowledge in an additional topic, consider one of the following annotations: Integral Design & Management, Technology in Sustainable Development, Entrepreneurship, Urban Planning & Engineering, Infrastructure Planning, Environmental Engineering or Dynamics of Structures.

Graduation examples

- Preliminary structural design and financial feasibility study of a transportable multifunctional stadium. Increasing numbers of large-scale, high-quality stadiums are being left vacant after the event for which they were built. Therefore, a demountable and transportable A-venue stadium has been designed.
- Structural feasibility of the rotating tower in Dubai.

- Glass columns: a fundamental study to slender glass columns assembled from rectangular monolithic flat glass plates under compression as a basis to design a structural glass column for a pavilion.
- Flexible mould for production of double-curved concrete elements.

Career prospects

Due to the complexity of buildings, the development of building materials, the ever-changing user requirements and new technological insights, there are many building engineers needed. Getting all of the specialists to cooperate efficiently is as great a challenge as the actual construction of buildings. As there are many specialised companies involved in construction, there are extensive career opportunities. Think of building contractors, real estate developers, institutional investors, architectural, engineering and consultancy firms, research institutes and educational institutes.



2nd
in QS subject ranking
Civil Engineering



48%
international students



31
first year students in 2020



65%



35%