Faculties: Mechanical, Maritime and Materials Engineering; Civil Engineering and Geosciences; Electrical Engineering, Mathematics and Computer Science; Aerospace Engineering.

Minor
Airport of the future

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'The minor 'Airport of the Future' comprises a major project, in which an existing airport is examined. This examination is done with software that simulates the operations of an airport'

Language	English
Start	September 2015
Credits	30 ECTS
Capacity	80

The minor Airport of the Future is jointly organised by the faculties of Mechanical, Maritime and Materials Engineering (3mE), Civil Engineering and Geosciences (CEG), Electrical Engineering, Mathematics and Computer Science (EEMCS) and Aerospace Engineering (AE). The minor is aimed at engineering students from all bachelor programmes offered at the TU Delft, who are interested in the design, planning, management and operational aspects of airports.

Why?
An airport operates in a competitive, dynamic, complex, and unpredictable environment. Development and growth of any large airport is to a large extent determined by its ability to balance business realities, long-term expansion requirements, and environmental and social demands. The minor Airport of the Future is oriented to those engineering students who would like to understand how airports are designed, planned and operated in such a complex and uncertain environment. The issues confronting airports, both at the operational and strategic level, are truly multi-disciplinary in nature. The minor Airport of the Future is able to cover the entire multidisciplinary field of airport development, planning and operation through clustering of knowledge from various branches of science and technology available within the TU Delft.

Who is this minor for?
The minor Airport of the Future is designed such that eligible students from all engineering disciplines can enter the minor programme, without the need for specific prerequisite courses. Students from all BSc programmes that enter the minor will follow one and the same minor programme, without any subdivision into tracks.

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They are also expected to all attain the same level of knowledge and skill (i.e., meet the minor exit qualifications) after completing the minor, regardless of their background. Engineering students from the TU Delft are eligible to enter the minor once 90 ECTS of their respective BSc programme has been completed. Students that do not fully, but nearly, comply with these requirements may apply for admission, but acceptance will be judged and granted on a case by case basis.
www.minors.tudelft.nl

The Programme

The minor covers both the development and operational aspects of the airport system - an airport and its associated subsystems, including its airlines.

Development issues

The minor addresses in detail each of the following development issues:

- Airport geometric design characteristics, including the layout of runways, taxiways and aircraft aprons
- The design of passenger buildings and gate facilities
- Airport logistic systems, notably baggage handling systems
- Siting criteria for new airports including terminals
- The planning for ground access to the airport
- Microwave sensors and radars for airport applications

Management issues

It also gives treatment to the operational and management issues of:

- Air traffic management
- Management of congestion and queues (passengers and aircraft)
- Demand management
- Environmental impacts
- Logistic processes
- Ownership and organisational structures
- Airport economics and finance
- Regional transport networks
- Airport strategic planning; policy analysis and uncertainty management

Minor structure

The minor comprises four "blocks" of courses and associated exercises (each block is associated to one particular faculty), and is concluded with a comprehensive capstone project that helps students integrate and apply the multidisciplinary know- ledge and strategies learned in the various courses.

Blocks and Capstone project (30 ECTS in total)
Block 1 (6 ECTS): Airport logistics and technology (3mE)
Block 2 (6 ECTS): Airport landside accessibility (CEG)
Block 3 (4 ECTS): Microwave sensors and radars for airport applications (EEMCS)
Block 4 (8 ECTS): Air transport and airport airside planning and operations (AE)
Capstone project (6 ECTS)

Capstone project:

The goal of the capstone exercise is to give students the opportunity to weave together the multidisciplinary elements offered in the four course blocks into an integrated (team) project.

Information
For more information about all courses and projects, see **www.studyguide.tudelft.nl**

www.lr.tudelft.nl/airport-of-the-future

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