Admission requirements and application procedures

This is a summary of the requirements only. They are subject to change. Therefore please always consult the websites indicated which give the latestand definitive instructions. Applicants with a university Bachelor's degree that indicates a capacity for spatial thinking are eligible for admission, such as: Geodesy, Environmental Management, Archaeology, Hydrology, Civil Engineering, Aerospace Engineering, Geology, Physical- or Human Geography, Computer Science, Mathematics, Geoinformatics or Architecture, Urban Design and Spatial Planning.

Dutch BSc degree

Applicants holding a Bachelor's degree from one of the 3TU universities automatically qualify for admission. Students with a BSc degree in a related field will be assessed individually.

Dutch HBO or other Bachelor degree

Applicants with a Bachelor's degree from a Dutch HBO or other Dutch University will be assessed individually as the degree programme is designed to accommodate students whose prior preparation does not meet all requirements for completion of the programme.
In most cases, if you hold a BSc degree that is closely related to the master's programme you are applying for, you will be admitted. To see which master's programmes are open to you on completion of your bachelor's degree from a non-technical Dutch university go to **www.studiekeuze123.nl.**

If you completedyour bachelor's at a technical university, go to **www.doorstroommatrix.nl**

In order to be admitted onto the programme, you must:

- meet the entrance requirements for Mathematics: a pre-university (VWO) certificate in Nature en Technique
- meet the entrance requirements for English: a pre-university (VWO) certificate or the internet-based TOEFL (minimum score of 90), the university version of IELTS (minimum score of 6.5), the Cambridge Certificate of proficiency in English or the Cambridge Certificate in Advanced English

Please take into account that your certificate must be received by TU Delft, before you can register.

Bridging programme

As convergence programme we advise BSc students to follow the National Geo-Information Minor. This Minor is a collaboration of six Dutch Universities. **www.nationalegiminor.nl**

Do you want more information?
You can e-mail your question to **IC-bk@tudelft.nl** and we will answer you as soon as possible.

International applicants

Applicants with a Bachelor's or Master's degree from a non-Dutch University can apply between 1st of October and 1st of April. Applicants will be assessed individually and must:

1. hold a bachelor's degree from a respected university (or proof that you are soon to complete one) in a main subject closely related to the MSc programme to which you are applying;
2. have achieved a bachelor cumulative grade point average (CGPA) of at least 75% of the scale maximum, unless specific requirements are defined for the country in which you obtained your bachelor's degree;
3. meet our English language requirements.
4. submit a motivation essay, reference letters and an extensive curriculum vitae.

The general requirements are given on the TU Delft admissions and applications website: **www.admissions.tudelft.nl**

More specific information about the requirements of the MSc Geomatics for the Built Environment programme are given on the website: **www.geomatics.tudelft.nl**

Do you want to know more? You can e-mail your question to **internationaloffice-bk@tudelft.nl** and we will answer your question as soon as possible.

For further information
Please visit the webpage for all details, complete requirements, deadlines and contact information:
www.geomatics.tudelft.nl

Dr. ir. Mathias Lemmens
Programme Director
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For international applicants
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TU Delft

February 2018

Faculty of Architecture and the Built Environment

MSc Programme
Geomatics for the Built Environment

Geomatics for the Built Environment

Advanced tools for solving complex spatial challenges

Diploma	Master of Science Geomatics for the Built Environment
Credits	120 ECTS, 24 months
Start	September
Language of instruction	English
% international students	56%

Geomatics for the Built Environment provides vital spatial knowledge about the built environment. Students learn to use advanced techniques in data collection and analysis, spatial information modelling and the visualisation of data. They learn about the use, governance and application of geographic data for solving real-world problems in an innovative way. Geomatics professionals easily find jobs in (international) companies, universities and governmental institutes.

The programme at TU Delft differs from other Geomatics programmes in its interdisciplinary nature and technical depth. Geomatics for the Built Environment, located in the Faculty of Architecture and the Built Environment, combines knowledge from mathematics, computer science and geography in order to better understand and shape the built environment. Students apply their skills in 3D modelling, GIS, mapping, serious gaming, simulation and visualisation to a wide range of fields such as disaster management, decision support systems, location based services and land administration. Applicants are expected to have a proficiency in computers and advanced skills in programming is advantageous.

Prospective students must demonstrate a sensibility towards geographical issues and have a keen interest in spatial thinking. The programme is well suited for architecture students wishing to deepen their technical skill set and computer scientists who are interested in solving geographical problems. Today, Geomatics students come from Human or Social Geography, Surveying, Earth Science, Architecture, Urbanism & Planning, Computer Science, Civil Engineering, Informatics and Technology, Policy and Management.

Programme
First year
In the first year, you will take the core courses. The core courses provide a strong foundation by teaching the fundamentals of data gathering, processing, analysing and visualisation. The core courses are built up from fundamentals and basic skills to application and integration. The first year concludes with the Geomatics Synthesis project. The project allows you to combine the knowledge from the core programme and apply it to a real-world situation while gaining hands-on experience in project management. Students experiment with drones for point cloud data collection or sensitive wifi- and bluetooth sensors for tracking people.

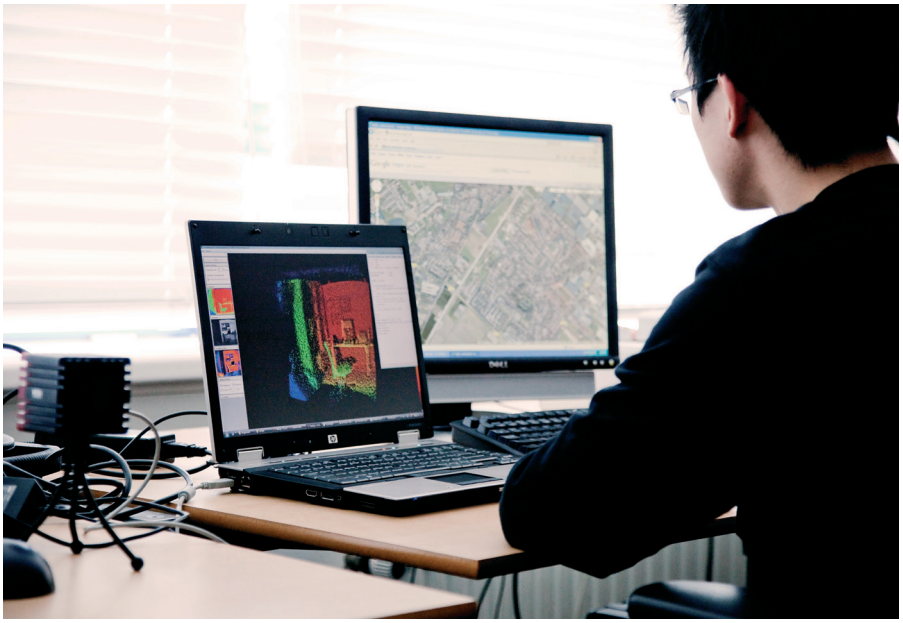
TU Delft

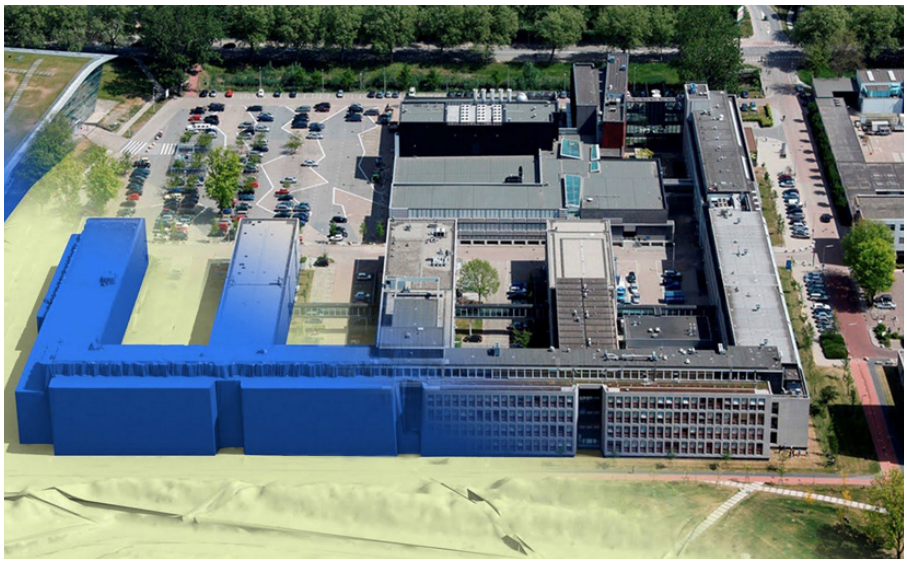
Curriculum Geomatics

First year			
1st semester		2nd semester	
1st quarter	2nd quarter	3rd quarter	4th quarter
Python Programming (5 ECTS)	Geo-DBMS (5 ECTS)	3D Modeling (5 ECTS)	Geo Web Technology (5 ECTS)
Sensing Technologies (5 ECTS)	Decision Support (5 ECTS)	Geo Datasets (5 ECTS)	Synthesis Project (10 ECTS)
GIS and Cartography (5 ECTS)	Location Awareness (5 ECTS)	Geo Legal Aspects (5 ECTS)	
Second year			
3rd semester		4th semester	
1st quarter	2nd quarter	3rd quarter	4th quarter
Graduation project (45 ECTS)			
Domain Electives (15 ECTS)			

ECTS = European Credit Transfer System
One academic year = 60 ECTS (1680 hrs study, 1 ECTS 28hrs)
Total amount of credits MSc programme = 120 ECTS

For more information on all courses, please visit: **www.studyguide.tudelft.nl**





Second year
In the second year, the focus will be on the individual programme. Students can either study abroad for one semester (ERASMUS), follow international electives (ATHENS) or choose local domain electives. The study will be concluded with an individual graduation project. In this project you can choose an encouraging subject and do a very extended research project, either at the university or in a company.

Study Abroad
International exchange can be arranged in the 3rd semester, parallel to starting the graduation project. We have contracts with many European Universities including Ghent, Graz, Hamburg, Helsinki, Munich, Nottingham, Stockholm, Stuttgart and Zurich.

Domain Electives
The domain electives are interlinked courses meant to broaden and/or deepen your knowledge in one of the many Geomatics application fields: Geoscience, Urban Design and Planning, 3D-Geo-Information, Remote Sensing, (Design) Informatics, Geo Data Acquisition and (Big) Data Management.

The domain electives can also be used to update your knowledge in mathematics, computer science or geography. Very popular electives are the app building course, land surveying, remote sensing, robotics, and 3Dvisualisation. The full list of and the domain can be found at: **www.geomatics.tudelft.nl.**

Career prospects

Geomatics engineers are in high demand as there are many projects requiring spatial information specialists and there is a shortage of capable graduates. Past students are sought out by specialised geomatics companies, large companies dealing with spatial data and governmental bodies.

Geomatics graduates can find positions in local and national governmental agencies such as the Dutch Kadaster, Geonovum or local municipalities with their activities ranging from data gathering and information processing to project initiation and management. Others take positions in the private sector with industrial firms and consultancy agencies, such as Google, CGI, Cyclomedia, Geodan, Fugro, TNO, Here (the geo-component of Nokia), Tracé (Secondment or traineeships), DataQuint, Alliander or ESRI.

Others pursue doctoral degrees at national and international universities and research institutes. Geomatics graduates have a specialised skill set that is widely valued and that allows them to work in interdisciplinary teams on ground breaking projects worldwide

Rusné Šileryté (graduated June 2015)

Since my early teenage hood I have already had a strong interest in urban studies. I always considered it a field of expertise that incorporated a wide range of disciplines, among which my favourite subjects at high school – arts and mathematics. As a consequence, I later decided to study Architecture. However, after graduating and working in the field for a year, I felt that the mathematics part that I also yearned for, was absent.

The Master of Geomatics in TU Delft crossed my way somewhat accidentally while looking for a Master's programme at a foreign university. From the first glance it looked intriguing, since it was very technical and 'mathematical'; but at the same time it was hosted in the faculty of Architecture. I have to admit, it seemed risky and challenging to take up this Master's after 5 years in Architecture. Nevertheless, I finally took the risk and now, upon graduating, I strongly feel it was the rightest of choices. From my point of view, the biggest strength of the Geomatics programme in TU Delft is its openness for innovation and incentive to experiments. In these two years I have mostly learned to learn – to look for new ways of solving well-known problems, be interested into the latest technology and keep a finger on the pulse of current developments.

The studies have unveiled to me a new aspiring and emergent field. Apart from the studies, I have really enjoyed the Netherlands as well as living, learning, experiencing and working in a very multicultural community here in TU Delft. Finally, after graduating, I am aiming to pursue a PhD within the field of Geomatics, combining it with my previous knowledge and passion for Architecture and Urbanism. Luckily, the Master of Geomatics seems to be able to successfully open the door to PhD positions in such universities as Zurich, Melbourne or Copenhagen. Now it is only a matter of choice!