

Geomatics for the Built Environment



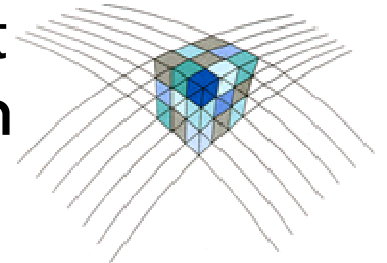
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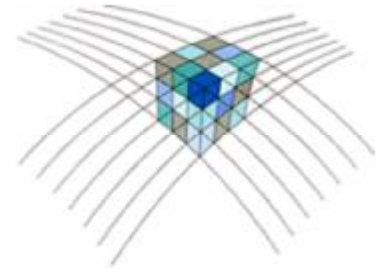
Dr.ir. Tjeu Lemmens

Education Director

NCG

NCG MSc GI Onderwijsbijeenkomst
17 april 2018, Fugro Leidschendam

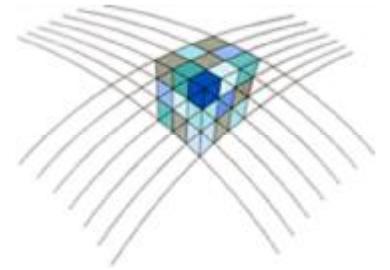




0. Eindtermen 1/3

Is familiar with existing scientific knowledge, and has the competence to increase and develop this through study, and is competent in one or more scientific disciplines covering the complete geoinformation chain, by

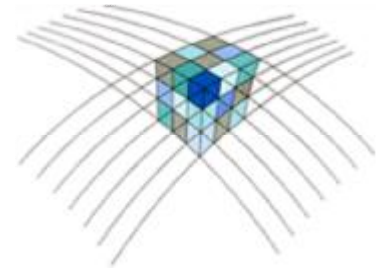
- a) having appropriate knowledge of the role of geo-information in decision making applied to the built environment;
- b) applying a formal, theoretical and methodologically sound approach to store, process, manage, disseminate and visualise geo-data and geoinformation;
- c) acting at the forefront of data analysis methodology and spatio-temporal database management systems technology;
- d) having appropriate knowledge of legal and organisational aspects of geo-information; and
- e) utilising a technology and application driven approach to geodata acquisition and geo-information extraction.



0. Eindtermen 2/3

has the research competences to

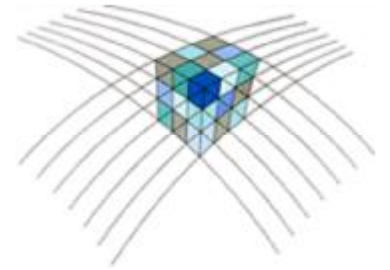
- a) investigate and analyse spatio-temporal models and systems of complex real-world situations;
- b) formulate hypotheses or research questions and develop new concepts;
- c) validate developed concepts by appropriate prototypes; and
- d) analyse and evaluate thoroughly obtained results



0. Eindtermen 3/3

has the competences to design, implement and use

- a) models and systems for management, storage, processing, integration, exchange and dissemination of geo-information;
- b) systems and methodologies to analyse measurements and other evidence material for the purpose of geoinformation extraction; and
- c) select, combine and extend above-mentioned systems and methodologies to meet geo-information requirements, notably in the built environment, in the present and in the future.



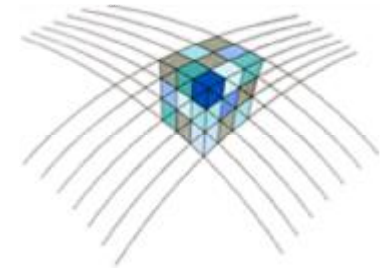
1. Structuur opleiding

First Year

- 10 Core Courses (5EC)
- Synthesis Project (10EC)

Second Year

- Electives (15EC)
- Graduation Project (45EC: 15 + 30 EC)



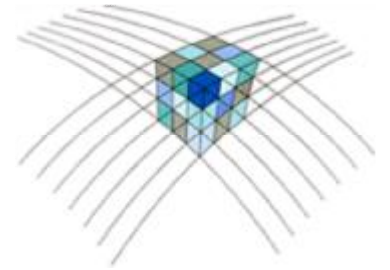
2. Vakken 2017-2018

1 st quarter	2 nd quarter	3 rd quarter	4 th quarter
1 st year (60 EC)			
GEO1000 (5 EC) Python Programming	GEO1003 (5 EC) Location Awareness	GEO1004 (5 EC) 3D-modelling	GEO1007 (5 EC) Geo web technology
GEO1001 (5 EC) Sensing Technologies	GEO1005 (5 EC) Spatial Decision Support	GEO1008 (5 EC) Geo-datasets	GEO1101 (10 EC) Geomatics Synthesis Project (GSP)
GEO1002 (5 EC) GIS & Cartography	GEO1006 (5 EC) Geo-DBMS	GEO1009 (5 EC) Geo-Info Law	
2 nd year (60 EC)			
GEO2010 (15 EC)		GEO2020 (30 EC)	
Domain Electives (15 EC)			

3. Kentallen



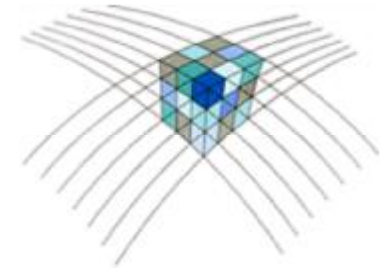
Geomatics Influx	2012	2013	2014	2015	2016	2017
international	5	7	5	5	14	16
<i>EU</i>	3	4	3	3	11	8
<i>Non-EU</i>	2	3	2	2	3	8
NL (excl. TU Delft)	1	1	7	1	2	1
TU Delft students	4	14	17	6	7	6
Total	10	22	29	12	23	23



4. Uniek

Covers the entire geo-information chain,
with emphasis on

- Technology, concepts and principles
- Thorough insight into Geo-data, DBMS, software development, real-world applications



5. Vorige visitatie (1)

Vorige visitatie: Oktober 2012 (2007-2012)

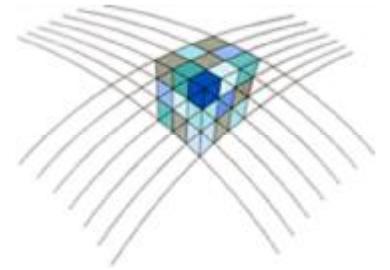
Master's programme in Geomatics was undergoing a substantial transformation

New master's program implemented in September 2012

The master's programme Geomatics fulfils the requirements of the criteria set by NVAO		
Standard 1	Intended learning outcomes	satisfactory
Standard 2	Teaching-learning environment	satisfactory
Standard 3	Assessment and achieved learning outcomes	satisfactory
	General conclusion	satisfactory

5. Vorige visitatie (2)

- Greatest concern is the low annual intake of master students
 - Teaching staff is dedicated and has the correct expertise and level
 - Didactic vision is not well elaborated and rather traditional. Apply more contemporary and innovative teaching methods as soon as possible.
 - The study facilities are first-rate.
 - Next visitation: mid-June 2018



6. Toekomst

2017/2018 new elective Geomatics in Practice (5EC)

Influx increases to around 60 students

2019: Minor GIS to attract more TU Delft students

Ambition: By 2025 a full-fledged BSc/MSc Geomatics programme.