UNIGIS Amsterdam

VU UNIVERSITY AMSTERDAM

Geographical Information Science

Vrije Universiteit Amsterdam

CROHO 75040

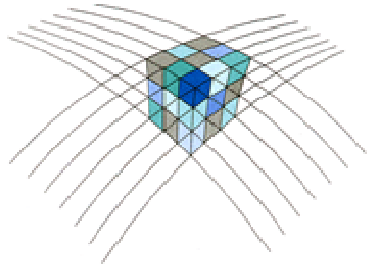
Dr. Niels van Manen

Programme Coordinator

NCG

Nederlands Centrum voor Geodesie en Geo-informatica (NCG)

NCG MSc GI Onderwijsbijeenkomst
17 april 2018, Fugro Leidschendam



0. Final Learning outcomes

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The Academic Role

1. Have the advanced **academic and research skills** to contribute to the body of knowledge:
    a. Graduates can demonstrate a command of all the academic research skills necessary to make (academic, managerial and societal) relevant and original contributions to the GIS profession.

The Academic Professional Role

2. Have an **evidence-based approach** to solving **complex business problems**:
    a. Graduates can demonstrate their mastering of state-of-the-art theory and technology skills in the domain of GI Science and Technology.
    b. Graduates can develop solutions from different theoretical perspectives and technological approaches for complex real-life geospatial problems.
3. Have the professional/social skills to interact with other professionals:
    a. Graduates can present the geospatial insights they have obtained regarding complex multidisciplinary problems to professionals and non-experts convincingly.

The Academic Professional as Citizen Role

4. Have a **broad horizon beyond the professional area**:
    a. Graduates can explain the relevance of GI science to (inter)national and interdisciplinary developments.
5. Are **self-reflective professionals**:
    a. Graduates can take responsibility for their own learning, knowledge and actions.

UNIGIS is a post-graduate academic master's programme that focuses on delivering GIS **professionals** who possess a strongly developed **critical and analytical** intellect, a profound understanding of **state-of-the-art GIS concepts, methods and technologies** and ability to apply these in a structured and reflective manner to **complex societal issues**.

1. Structure programme

Table 2.1: Curriculum of the Master's programme GIS (part-time) as per September 2017 intake

Period	Courses (EC)			
Year 1 – UNIGIS Certificate				
Period 0 (Sep)	Introduction Workshop (0)			Tutorial support
Period 1 (Sep-Nov)	Advanced GIS (5) & Introduction Workshop (0)			
Period 2 (Nov-Jan)	Database Theory (4)			
Period 3 (Feb-Apr)	Geodata Capture, Standards and Quality (5)			
Period 4 (Apr-Jun)	Research Methods (4)			
Period 5 (Jun)	Workshop Spatial Analysis (1)			
Year 2 – Specialisation	**GIS**	**GIScience**	**GIS & Management**	**GIS & Environment**
Period 1 (Sep-Nov)	GIS in Organi-sations (5)	GIS & Modelling (5)	GIS in Organisa-tions (5)	Environm. Impact Assessment & GIS (5)
Period 2 (Nov-Jan)	Elective (5)	Databases for Enterprise GIS (5)	GIS Project Management (5)	Remote Sensing for GIS Applications (5)
Period 3 (Feb-Apr)	Elective (4 or 5)	Elective (4 or 5)	Elective (4 or 5)	Elective (4 or 5)
Period 4 (Apr-Jun)	Elective (4 or 5)	Elective (4 or 5)	Elective (4 or 5)	Elective (4 or 5)
Period 5 (Jun)	Workshop Decision Support (1)			
Year 3 – MSc Research and Thesis				
Period 0 (Sep)	Thesis workshop (0)			
Period 1 (Sep-Jun)	Research Proposal and Thesis (22)			

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The Master's Geographical Information Sciences is a three-year programme with three regulated exit moments.

Certificate, 20 ec – 1 year
Diploma, 40 ec – 2 years
MSc, 60 ec – 3 years

2. Courses 2017-2018

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Code	Compulsory modules	Credits
P1-Adv	Advanced GIS	5 ECTS
P1-DATABASE	Database Theory	4 ECTS
P1-CAPTURE	Geodata Capture, Standards and Quality	5 ECTS
P1-RMETHOD	Research Methods in GIScience	4 ECTS
P1-WSHOPI	Workshop Spatial Analysis	1 ECTS
P2-WSHOPII	Workshop Spatial Modelling	1 ECTS
P3-THESIS	MSc Proposal and Thesis	22 ECTS

Code	Elective modules	Credits
P2-EM5/Sy1Mt1	GIS in Organisations	5 ECTS
P2-EM5/Sc1	GIS and Modelling	5 ECTS
P2-EM5/Sc2	Databases for Enterprise GIS	5 ECTS
P2-EM5/Mt2	GIS Project Management	5 ECTS
P2-EM5/En1	Environmental Impact Assessment & GIS	5 ECTS
P2-EM5/En2	Remote Sensing for GIS Applications	5 ECTS
P2-EM5EU	European Aspects of GIS	5 ECTS
P2-EM45	Internet GIS	4 ECTS
P2-INTERNSHIP	GIS Internship	4 ECTS

New in 2018:
GeoDesign
Incident and Crisis Management

3. Numbers

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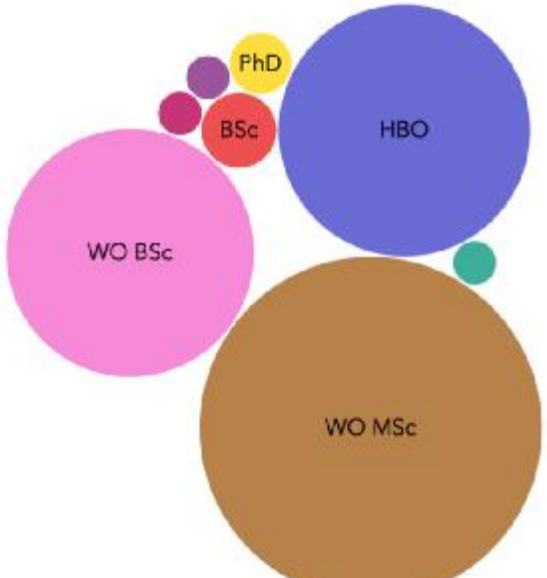
	2013	2014	2015	2016	2017
New enrolments	22	11	10	17	20
Total students enrolled	78	77	66	63	81
Foreign students	41%	18%	20%	18%	65%
Female students	41%	55%	50%	724%	40%



Highest prior education, 2013-2017

4. Unique

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- **Strong international orientation**
  - **Large number of expats based in Nl and international students based abroad**
  - **UNIGIS International Foundation, world-wide network of MSc GIScience programmes, including**
    - **International summer schools**
    - **Elective modules across the network**
    - **European Certificate of Geographical Information Science**
- **Strong links with professional field**
  - **Most students are active GIS professionals**
  - **Alumni include 500+ GIS professionals in Nl**
- **Combination online and on the job learning**
  - **High quality virtual learning environment**
  - **Apply case studies from work to MSc assignments and thesis**
- **Flexibility to follow own learning path:**
  - **Exit moments: PGCertificate (foundation); PGDiploma (specialisation); full MSc (specialisation + thesis)**
  - **Specialisation: researcher, engineer and consultant**

5. Visitation

- **Last Visitation 2012; Next: Site visit 29 June 2018**

Overall judgement:	**satisfactory**
Intended learning outcomes:	**good**
Teaching-learning environment:	**satisfactory**
Assessment- Achieved Learning outcomes:	**satisfactory**

Remarks:

1) **Make the programme more practical/ applied-> introduced Internship for students not yet employed as GIS professional; additional GIS tutorials**

2) Make clearer the difference in aims and levels between the three parts of the programme (certificate, diploma, degree) -> frame the exit profiles in Study Guide

3) Continue to update study materials -> renewed Compulsory modules with UNIGIS UK; new Elective modules including through Erasmus+ GeoS4S with other international MSc GIS programmes

6. Future

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Discussion:

(A) Refocus the curriculum concept

Bring out more clearly the connections between GIScience and data/ information science.

Examples: incorporate programming R and Python, data mining, linked data, BIM

(B) Consolidate new didactic concept

Focus on collaborative learning taking full advantage of e-learning innovation and on-the job learning.

Examples: webinars, discussion fora, student-produced video presentations, peer-review tasks, etc. Involve colleagues in student's learning trajectory.