

# ITC ENSCHEDE, THE NETHERLANDS

*Gateway to international knowledge exchange  
focusing on capacity building and institutional development*

## **INTRODUCTION TO THE MASTER'S PROGRAMME GEO-INFORMATION SCIENCE AND EARTH OBSERVATION**

Photograph: NASA/REID WISEMAN/EPA



UNIVERSITY OF TWENTE.



Education is the kindling of a  
flame, not the filling of a vessel.

Socrates

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# TEACHING AND LEARNING



BE CURIOUS

BE INQUISITIVE

BE INDEPENDENT

BE CRITICAL

BE PROACTIVE

A satellite view of Earth from space, showing a grid-like satellite structure in the foreground and a glowing city at night on the Earth's surface. The text is overlaid on a black rectangular background.

**YOUR PROGRAMME:**

**GEO-INFORMATION SCIENCE  
AND EARTH OBSERVATION**

# GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

2-year Master's programme (MSc)

12-month Postgraduate diploma (PGD) course

## Specializations

- Applied Remote Sensing for Earth Sciences
- Geoinformatics
- Land Administration
- Natural Hazards and Disaster Risk Reduction
- Natural Resources Management
- Urban Planning and Management
- Water Resources and Environmental Management.



**CeQuint.**  
Excellence in Internationalisation



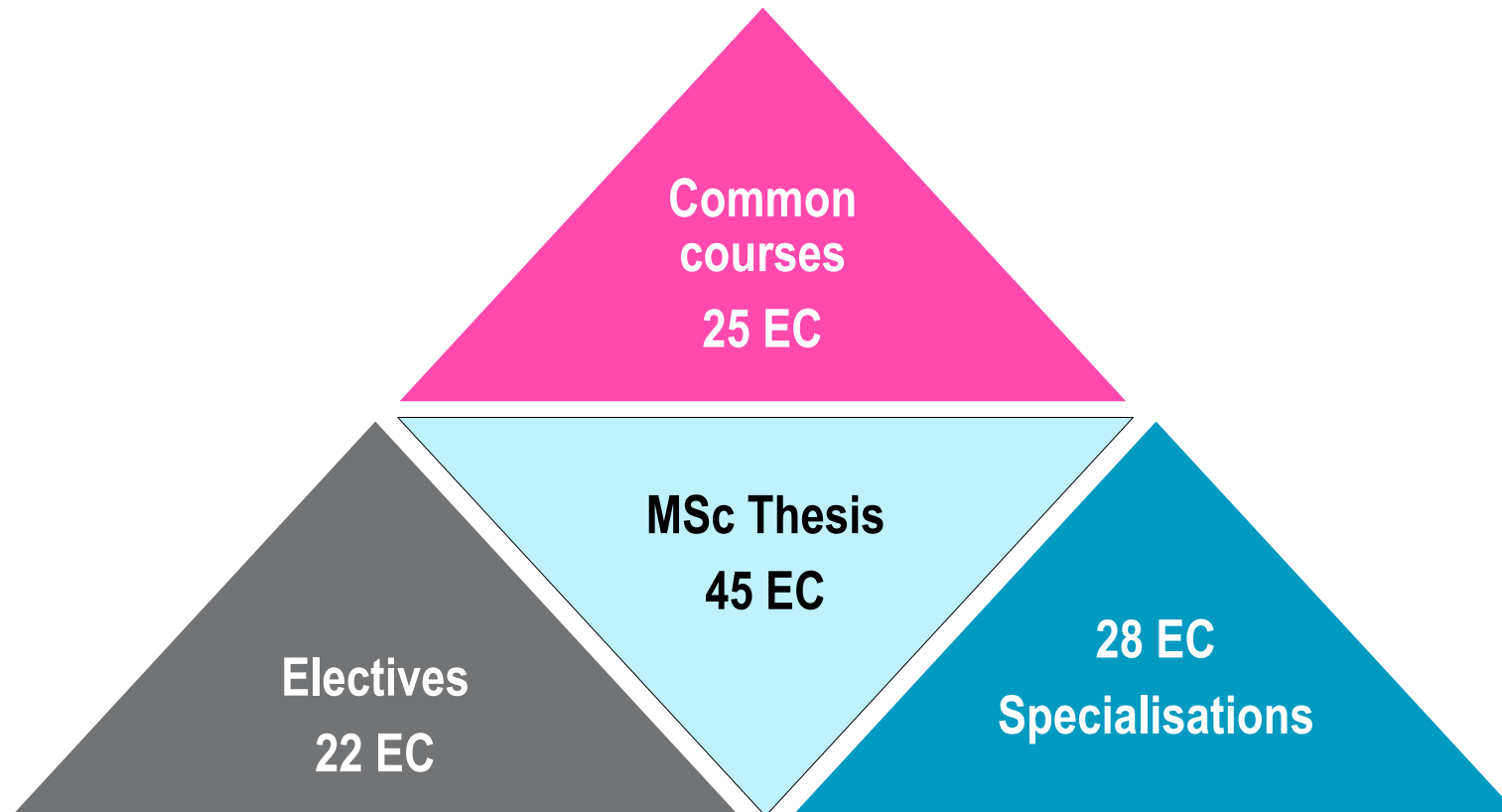
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# GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

## 2-year Master's programme



**CeQuInt.**  
Excellence in Internationalisation



# GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

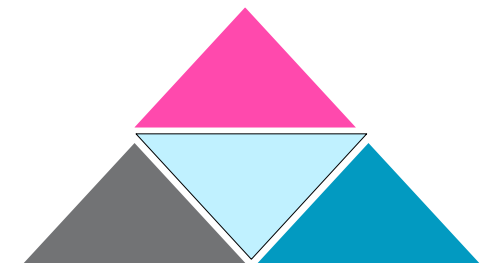
## 2-year Master's programme

YEAR 1			
Quartile 1	Q2	Q3	Q4
Geo-information science and remote sensing for Geospatial Problem Solving (14 EC)	Specialization (7 EC)	Specialization (7 EC)	Specialization (7 EC)
	Specialization (7 EC)	Global challenges, local action (7 EC)	Elective (7 EC)
Academic skills (4 EC)			

YEAR 2			
Quartile 5	Q6	Q7	Q8
	MSc research proposal and MSc research (45 EC)		
Individual study programme (15 EC)			

COMMON COURSE
  SPECIALIZATION COURSE
  MSC RESEARCH
  ELECTIVE COURSE

- 2 academic years: September to July, of each 60 ECTS
- Research based MSc
- Quartile based calendar 10 weeks - 15 ECTS



# GEO-INFORMATION SCIENCE AND EARTH OBSERVATION PGD course

YEAR 1				
Quartile 1	Q2	Q3	Q4	
Geo-information science and remote sensing for Geospatial Problem Solving (14 EC)	Specialization (7 EC)	Specialization (7 EC)	Specialization (7 EC)	
	Specialization (7 EC)	Global challenges, local action (7 EC)	Final Assignment (7EC)	
Academic skills (4 EC)				

COMMON COURSE    
  SPECIALIZATION COURSE    
  MSc RESEARCH    
  ELECTIVE COURSE

- One-year Post Graduate Diploma Course
- Similar courses as first year of MSc, but with a Final Assignment



# MSc GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

## Course scheduling

YEAR 1			
Quartile 1	Q2	Q3	Q4
Geo-information science and remote sensing for Geospatial Problem Solving (14 LC)	Specialization (7 EC)	Specialization (7 EC)	Specialization (7 EC)
	Specialization (7 EC)	Global challenges, local action (7 EC)	Elective (7 EC)
Academic skills (9 EC)			

- Two or three courses taught at once
- Parallel courses (10 weeks <40% contact hours per course! You are expected in class)
- Courses are 7 ECTS → 1 ECTS = 28 hours study load  
1 EC per quartile is 42 hours study load per week

eg.: 7 EC = 196 hours = 12 two-hour lectures + 8 three-hour supervised practicals + 148 hours of selfstudy and group work (incl. exams).

# MSc GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

## Common courses

YEAR 1				
Quartile 1	Q2	Q3	Q4	
Geo-information science and remote sensing for Geospatial Problem Solving (14 EC)	Specialization (7 EC)	Specialization (7 EC)	Specialization (7 EC)	
	Specialization (7 EC)	Global challenges, local action (7 EC)	Elective (7 EC)	
Academic skills (4 EC)				

 COMMON COURSE

 SPECIALIZATION COURSE

 MSc RESEARCH

 ELECTIVE COURSE

- Three common courses throughout the first year
  - GIS & RS for Geospatial Problem Solving
  - Global Challenges, Local Action
  - Academic Skills

# MSc GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

## GIS & RS for Geospatial Problem Solving

### “The CORE”

#### Three courses (14 EC total), offered in the 1<sup>st</sup> Quartile

- Providing you with a common understanding about GIS and RS principles.
- Hands-on experience in using software tools
- Challenge you in developing an attitude of using GIS and RS in dealing with geospatial problems and answering geospatial questions.
- Geospatial problem-solving cycle: identification, acquisition, management and exploration of data, analysis of data, and eventually the generation and communication of geospatial information needed for answering the geospatial questions.
- For some of you a good refresher, for others a steep learning curve



# MSc GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

## Global Challenges, Local Action

### 7 EC course, offered in the 3<sup>rd</sup> Quartile

- Increase your awareness of the urgency to address global challenges of the 21st century at multiple scales
  - Learn value and challenges of crossing disciplinary boundaries
  - Recognize the contribution of your own discipline in analysing global problems and designing actions at the local level.
1. a set of key global challenge lectures
  2. an interdisciplinary and project-based investigation to analyse a global issue more in-depth and collaboratively design a response at the local level.



# MSc GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

## Academic Skills

**4 EC course, offered throughout the first year** (usually on Wednesdays)

Foundational knowledge and skills required to undertake scientific research. A critical, scientific attitude and the ability to reflect upon own work and that of others will be developed.

- Handling scientific information; Critical reading; Research design; Scientific communication; Critical reflection

**You MUST pass this course in order to proceed with your MSc research in the second year.** Failing the course could lead to significant study delays



# MSc GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

## Specialization courses

YEAR 1				
Quartile 1	Q2	Q3	Q4	
Geo-information science and remote sensing for Geospatial Problem Solving (14 EC)	Specialization (7 EC)	Specialization (7 EC)	Specialization (7 EC)	
	Specialization (7 EC)	Global challenges, local action (7 EC)	Elective (7 EC)	
Academic skills (4 EC)				

COMMON COURSE
  SPECIALIZATION COURSE
  MSC RESEARCH
  ELECTIVE COURSE

- 7 specializations – each 4 courses of 7EC
- Free specialization: academic eligibility allows combination of specialization courses – contact study adviser for information

# MSc GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

## Elective courses

YEAR 1			
Quartile 1	Q2	Q3	Q4
Geo-information science and remote sensing for Geospatial Problem Solving (14 EC)	Specialization (7 EC)	Specialization (7 EC)	Specialization (7 EC)
	Specialization (7 EC)	Global challenges, local action (7 EC)	Elective (7 EC)
Academic skills (4 EC)			

COMMON COURSE
  SPECIALIZATION COURSE
  MSc RESEARCH
  ELECTIVE COURSE

- 7 EC course offered in 4<sup>th</sup> Quartile
- Choice dependent on specialization and MSc research interest



# MSc GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

## Information

**All information is online available:**

- **Study guide:** <https://studyguide.itc.nl/m-geo>
- **Intranet:** <https://www.itc.nl/intranet/education/>
- **Regulations:** <https://www.itc.nl/intranet/education/rules-and-procedures/>
- **Student guidance and support:**

<https://www.itc.nl/intranet/education/academic-matters-and-support/student-guidance/>





# WHO IS WHO

# WHO IS WHO IN EDUCATION

## PROGRAMME MANAGEMENT

**Prof Justine Blanford**  
Programme Director  
M-GEO



**Jeroen Verplanke**  
Programme Manager  
M-GEO



# WHO IS WHO IN EDUCATION

## STUDY ADVISER

Marie-Chantal Metz-Bekkers

Room 1287

Plan a meeting with me:

[metz.planner.utwente.nl](https://metz.planner.utwente.nl)

- Your first point of **formal** contact
- Has the overview of the full educational programme.
- For questions about your study, study plan and study progress.
- Guidance in your educational career.
- Meetings are always **confidential**

# WHO IS WHO IN EDUCATION

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Plan a meeting with me:

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- We offer help: learning assistants, coaching, mediation
- The Study Adviser is there for you, but **you should be aware of your rights and obligations** before you seek help.

# ARE YOU OKAY?

FEELING STRESSED?



↓ CONTACT YOUR ↓

STUDY ADVISER



AND/OR SIGN UP FOR THE

STRESS  
MANAGEMENT  
WORKSHOP



FEELING DOWN  
OR ANXIOUS?



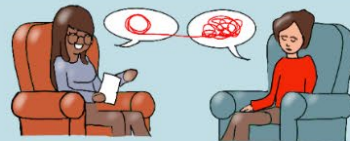
↓ CONTACT YOUR ↓

STUDY ADVISER



AND/OR

STUDENT AFFAIRS  
COACHING & COUNSELLING



FEELING LONELY?



↓ CONTACT YOUR ↓

FRIEND OR  
FELLOW  
STUDENT



AND/OR CHECK THE

STUDENT UNION WEBSITE

Student  
UNION.

# MASTER PROGRAMME TEACHERS

- **Coordinator:** Each study unit is coordinated by a staff member of a Scientific Department. The coordinator is responsible for the organization and execution of the entire study unit, and is first point of contact for staff and students when questions arise
- **Examiner:** The individual who has been appointed by the Examination Board to hold exams and tests and determine their results
- **Lecturer:** A staff member who teaches in (part of) a study unit.

# MASTER PROGRAMME

## TEACHER ROLE:

- Treat you as active and self-responsible learners
- Facilitate you in finding your way through the study materials
- Answer your questions
- Support you in making choices
- Assess your assignments
- Give feedback
- **NOT:** tell you what to do and how and what to learn

# MASTER PROGRAMME

## STUDENT ROLE:

Your study is your full-time (40 hrs/wk) job now:

- come to the office, whether you have classes or not.
- act professional and manage your time:
  - prioritize; match each task to the time when you are most effective for it;
  - observe deadlines, these will be normal in your future career.
  - take breaks, have free time
- act professional and coordinate with your team
- be proactive: ask questions and follow up on advice

**SAFE SPACE  
TO FAIL**





**ITC STAFF ARE  
THERE TO HELP**

## EDUCATION AND EXAM REGULATIONS (EER)



- **READ** the [Education and Examination Regulations](#) and the **Rules and Regulations of the Examination Board**

→ know your rights and obligations

- Info on learning outcomes, tests and assignment deadlines at start of course
- There are usually two opportunities for a test each year (check for exceptions)
- You have the right to inspect your exam papers and receive feedback from the examiner. *Do this to learn!*
- In case you cannot take a test for reasons beyond your control (sickness etc.), **notify the examiner in advance**, or you lose the test opportunity
- You must register for second test opportunities

# POINTS OF ATTENTION

## Tests

- You have to get used to tests & you have to learn to plan for tests
- Always check if you need to **register** for a test
  - **Written tests** → open or closed book
  - **Oral tests** → individual or in public (presentations)
  - **Written assignments** → individual & group work
- Group assignments can have one grade, which is based on a combined effort of the group.
- Know and observe your deadlines!
- Keep in mind that all courses in a quartile can have tests in the final week.



# POINTS OF ATTENTION

## Grades

- Tests are graded on a range of... **1.0 to 10.0**
- A grade of **5.5** or higher **for a test** is a pass
- Final grades for study units are rounded on ... half grades (0.5) on a scale of **1-10**
- To present and defend an MSc research Proposal:
  - **46 of 60 EC** of the first year completed, and
  - **Passed the Academic skills course**
- To graduate with an MSc Degree
  - All but 12 EC passed of 1<sup>st</sup> and 2<sup>nd</sup> year courses
  - No mark below 5 allowed for any study unit,



# COURSE EVALUATIONS



- You will receive an invitation for a **digital survey** after each quartile or study unit
- Input is **anonymous** and can't be traced back to you individually
- **Why** complete these evaluations? What is being done with it?
  - Input to concrete actions to improve next year's course/programe
  - Staff can improve their own (teaching) performance
  - Next year, students can read in Canvas which changes were made based on your input.
- Study unit coordinators can do **additional evaluations** (e.g. group discussions) for more detailed feedback



## INTERNATIONAL STUDENTS

### MoMi : Modern Migration Law

- All international (non-EER) are offered a student residence permit. In order to retain your residence permit, your educational progress must be adequate. As an international student you must attain at least half of the number study credits per study year. This is **30 EC's** per year. The Study Adviser will monitor your study progress and be in contact with you.
- Please see brochure: [Coming to study in the Netherlands \(ind.nl\)](#)

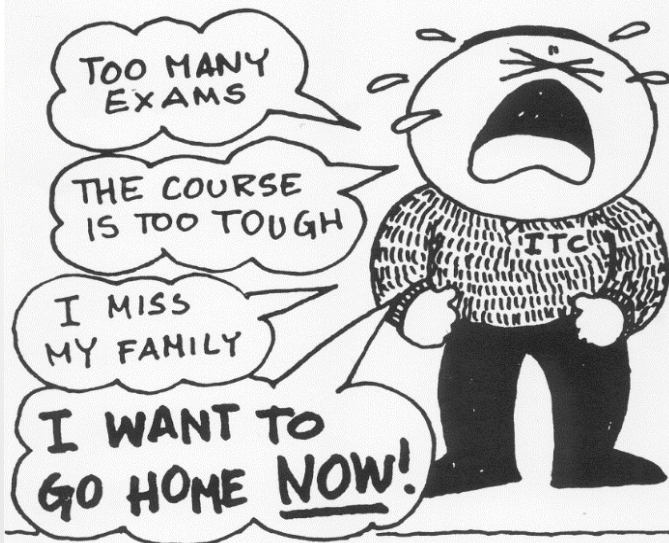
### Obligations of your sponsor

- Those students who receive a scholarship are normally also entitled to attain a certain amount of study credits per year. Check your scholarship agreement.

### BEFORE COMING.



### DURING STUDYING AT ITC.



### THE END OF THE COURSE.





**WE WISH YOU A  
LOT OF SUCCESS**

UNIVERSITY  
OF TWENTE.  
FACULTY ITC