MSc Geo-Information Science

Information booklet 2023-2024

GEO-INFORMATION SCIENCE
WAGENINGEN UNIVERSITY & RESEARCH

Content

Program and courses

The Master Geo-information science is a two-year master program. The program consists of some compulsory courses which all students have to follow. Besides the compulsory courses, there are restricted optionals, optionals and electives (free choice). This creates the option to tailor-make your program depending on your preferences, educational background and future aspirations. The figure below shows an example set-up of the study program.

TIP: Do you want to know how many ECTS a course is worth? The last two numbers of a course code indicate the ECTS of the course.

MSc Geo-Information Science program overview

		Period 1 Sep/Oct	Period 2 Nov/Dec	Period 3 Jan	Period 4 Feb	Period 5 Mar/Apr	Period 6 May/Jun
Year 1	Morning	Geo-information Science in Context (GRS34306)	Remote sensing (GRS20306)	Advanced Earth Observation (GRS32306)	Spatial and Temporal Analysis (GRS33306)	Spatial modeling and Statistics (GRS30306)	Remote Sensing and GIS Integration (GRS60312)
			Big Data (INF33806)	Data science for Smart Environments (GRS35306)	Machine Learning (FTE35306)	Deep Learning (GRS34806)	
						Data Management (INF21306)	
	Afternoon	Geoscripting (GRS33806)	Geo-information Tools (GRS20806)				
Year 2		MSc Thesis (GRS80436)				MSc Internship (GRS70424)	

Compulsory courses	Restricted Optionals (Choose 0 - 12 credits depending on prior education, consult with your study adviser)	Optionals GIS/RS (choose at least 6 credits from this cluster)	Optionals DATA (choose at least 6 credits from this cluster)

The program may change; no rights can be derived from this overview

Compulsory courses

Compulsory courses are courses that everyone in the MGI programme has to follow. These consist of the following courses:

- The MGI introduction course: Geo-information Science in Context (GRS34306)
- Geoscripting (GRS35306)
- The Academic Consultancy Training: Remote Sensing and GIS integration (GRS60312)
- The MSc major thesis (GRS80436)
- MSc internship (GRS70424)
- General Safety (ZSS06000) & Fieldwork Safety (ZSS06200): Enroll through OSIRIS and follow the Brightspace modules **(before graduation!!!)**

Restricted Optionals

The restricted optionals comprise of two courses that cover the basic skills of the MGI program, which the rest of the MGI courses build upon. The courses of the restricted optionals are:

- Remote Sensing (GRS20306
- Geo-information tools (GRS20806)

When you followed the [BSc minor Geo-information for Environment and Society (WUGIS)](#) or these courses were in your WUR bachelor, you do not need to follow these courses during the Master program. Please consult the study advisor when you took comparable courses from another university to discuss your options.

Optionals GIS/RS

The Optionals GIS/RS (see light green courses) consists of three courses of which you have to choose **at least one**. The courses included in this cluster are:

- Spatial and temporal analysis (GRS33306)
- Spatial modelling and statistics (GRS30306)
- Advanced Earth observation (GRS32306)

Optionals DATA

The Optionals DATA (see dark green courses) consists of five courses of which you have to choose **at least one**. The courses included in this cluster are:

- Big data (INF33806)
- Machine Learning (FTE35306)
- Deep Learning (GRS34806)
- Data management (INF21306)
- Data science for smart environments (GRS35306)

N.B. Keep in mind that some of these courses mention the course Programming in Python as assumed knowledge. Following extra materials online is possible to make sure you are well prepared for these courses. We have prepared an overview of materials, which you can find in chapter 'Programming Skills'.

Electives

When you fulfilled the program requirements you can choose an individual minor and/or elective courses to complete your MSc program up to (at least) 120 credits. These electives can be from different programs, depending on what suits your educational background and personal interests. See the [Study Handbook](#) for more information about the courses and minors at the university.

You can get in contact with second year MGI-students to ask for advise or find courses based on your personal interest (in line with your BSc-programme for example). Always **discuss your choice** with your study advisor **before** following the course!! Your study advisor can evaluate whether he/she expects the examining board will accept your elective.

Thesis

A thesis research is a compulsory part of every Master study program of Wageningen University & Research. Within the Laboratory of Geoinformation Science and Remote Sensing (GRS), a major thesis for a master program focuses on designing, conducting and scientifically reporting a research project in the broad field of Geo-Information Science. Such a thesis research corresponds to at least 36 ECTS of a master program. Several information sessions are organized to get an idea of thesis topics/ opportunities. The GRS thesis topics are maintained and kept up-to-date by the thesis coordinator and made accessible online via the GRS web page. A student can also propose his/her own thesis topic for the thesis research. In this case, the feasibility of the research is checked by the thesis coordinator and examiners

GRS thesis topics are closely related to the main fields of research of the GRS group:

1. Sensing & measuring

2. Modelling & visualization

3. Integrated land monitoring

4. Human - space interaction

5. Empowering & engaging communities

A GRS major thesis research is conducted under the supervision of a member of the GRS group. The location of the thesis work is with the GRS group but, after consultation with the supervisor, may also take place in another institute or company.

To get an impression of thesis topic possibilities please check this website.

Internship

An internship is a compulsory part of the MGI. It will help you gain working and research experience within the professional Geo-Information Science (GIS) and Remote Sensing (RS) domain. An MGI internship has to be a minimum of 24 ECTS, which corresponds with a 4 month period. A longer internship is possible, which a maximum of up to 36 ECTS. Please consult your study advisor when opting for an internship of more than 24 ECTS.

The internship should be in the field of Geo-Information Science and/or Remote Sensing in the broadest sense and take place at an organization in the field of GIS and/or RS. This can be any company, institute, or organization working on any aspect of GIS or RS in the Netherlands or abroad. The internship should meet the academic standards which mean that at least 60% of the internship must be spent on an MSc level personal research level.

Useful tips and links

Wageningen University information

Home page of the university: https://www.wur.nl/en.htm

Program site of the Master Geo-information Science: www.wur.eu/mgi

The online study handbook with information about courses, minors and programs: https://wur.osiris-student.nl/#/onderwijscatalogus/extern/start

Chair group site: https://www.wur.nl/en/Research-Results/Chair-groups/Environmental-Sciences/Laboratory-of-Geo-information-Science-and-Remote-Sensing.htm

Study advisor

The study adviser can help you define your study path and goals. Whether you need advice about which courses to take or how to improve your studying skills, the study adviser is the first one to get in touch with. As a new student this is the first contact point of the programme. If you have questions about the programme, courses or your programme planning you can contact the study advier.

You can contact the study advisor, Elise van Tilborg, at elise.vantilborg@wur.nl

Application

Students who wish to enrol in the MSc Geo-Information Science program at Wageningen University must:

- Have a bachelor's degree in the field of Environmental Sciences (planning, soil and water, hydrology, forest and nature, ecology, biology) or Information Technology. Some basic knowledge of GIS (geo-information systems) and remote sensing is required.
- Have a Grade Point Average for their BSc of at least 7 (or 70% of the maximum of the scale);
- Be fluent in English, both written and spoken.

All information can be found on the application page: www.wur.eu/apply

Grade point average: check in the Credential Guide on our website for the specific requirements for your country.

- Is your GPA not sufficient? Your application will still be taken into consideration however your chance to be admitted is lower.

Useful facts about the academic year

- A lesson hour is 40 minutes. Lectures, tutorials, group work and practical courses are usually scheduled in 2, 3 or 4-lesson hour blocks.

Time slots							
2 hour blocks (white)		**3 hour blocks (blue and white)**		**4 hour blocks (white)**			
1	8:20-9:00	1	8:20-9:00	1	8:20-9:00	1	
2	9:10-9:50	2	9:10-9:50	2	9:10-9:50	2	
3		3	10:00-10:40	3	10:00-10:40	3	10:00-10:40
4		4	10:50-11:30	4	10:50-11:30	4	10:50-11:30
5	11:40-12:20	5	11:40-12:20	5		5	11:40-12:20
6	12:30-13:10	6	12:30-13:10	6		6	12:30-13:10
Break		Break		Break		Break	
7	14:00-14:40	7	14:00-14:40	7	14:00-14:40	7	
8	14:50-15:30	8	14:50-15:30	8	14:50-15:30	8	
9		9	15:40-16:20	9	15:40-16:20	9	15:40-16:20
10		10	16:30-17:10	10	16:30-17:10	10	16:30-17:10
11	17:20-18:00	11	17:20-18:00	11		11	17:20-18:00
12	18:10-18:50	12	18:10-18:50	12		12	18:10-18:50

- Period 1, 2, 5 and 6 last 8 weeks and contain a study load of 12 ECTS credits.
- Period 3 and 4 last 4 weeks and contain a study load of 6 ECTS credits.
- 1 ECTS credit corresponds to approximately 28 hours of work (including preparation, self-study, tests, etc.).
- Exams will be taken within the period the teaching period.
- There are 3 designated periods for resists, in February (Resit A) immediately after period 3, in May (Resit B) immediately after period 5 and in July (Resit C) after period 6.

Resit period	Data
Resit A (courses period 1+2 *)	7 to 9 February 2024
Resit B (courses period 2**+3+4)	7, 8 and 10 May 2024
Resit C1 (courses period 5)	11 and 12 July
Resit C2 (courses period 6***)	17 to 19 July

*) Course code for period 2 starting with 1 or 2
**) Course code for period 2 starting with 3, 4, 5 or 6
***) Exceptions possible for courses which can't be graded within 5 days. The exams will then be scheduled on 25 or 26 July.

Please note: If a course is planned in multiple periods, the resit is scheduled based on the last regular period. For example: a course that is given in period 2 and 5 will have the resit in period C1.

- Periods are divided in weeks, weeks are identified with week numbers. The corresponding dates of these periods and week numbers can be found in the calendar of the academic year.
- Characteristics of exams:

- o Exams are usually 2 or 3 clock hours
- o Some students are entitled to extra time. The extra time is taken into account when the exams are schedules. The extra time is not visible in the schedule itself.
    - If you only need more time during exams or an enlarged font, you don't have to make an appointment with a student dean. However, you do need a valid medical statement, which you can find digitally in Osiris: https://www.wur.nl/en/education-programmes/current-students/student-guidance/student-dean/dyslexia-addadhd-or-autism-1.htm
- o Guidelines for students 2023-2024

Brightspace Page – Master Geo-Information Science

On the programme information site Geo-Information, you can find useful links and more information on thesis and/or internship procedures. You can also find more details on your study programme approval in the Planapp.

https://brightspace.wur.nl/d2l/home/139345

It might take some time before you have access to this page (due to needing a WUR account) and the start of the academic year. You can always request access through sending your study advisor an email.

Student life

Wageningen has a very active student life with a wide variety of student associations that organise many social and sport activities. An overview of the different association can be found here.

All study programmes the Wageningen University have a study association. The study association of MGI is Artemis. They organize frequently social and educational activities.

To contact Artemis:

Email: sa.artemis@wur.nl

Or visit them at the Gaia building, canteen downstairs

MGI-Edu-Buddy system

The MGI-Edu-Buddy System is there to get you familiar with the MGI program and its courses, get useful tips and tricks, and expand your network. Two second-year MGI students will be assigned to a group of first-year MGI students. As a group, you can meet in the Artemis-room to discuss and learn. The second-year MGI student will guide you when you want advice on courses, life in Wageningen, where to get your books, the best places to study on campus and anything else you want to know!

Housing

Most students who attend Wageningen University live in or near the city of Wageningen. Even though the public transportation to Wageningen is relatively good, most students prefer living close to the university. The University does not provide housing, so it is advised to start your search on time. Have a look at some tips and tricks here, to help you in your process of finding a nice place to stay during your studies at Wageningen University.

Programming skills

If you want to (or need) to brush up your programming skills before the start of the academic year and for the course 'Geoscripting', you can follow the courses as listed below. Furthermore, we organize a 'Programming Onboarding Day' in the week before the start of lectures to make sure you know whether you are fully 'programming-ready' for Geoscripting.

The following links are for programming experience:

https://www.edx.org/course/introduction-computer-science-harvardx-cs50x

Python introduction on Datacamp:

https://www.datacamp.com/tracks/python-fundamentals

R introduction on Datacamp:

https://www.datacamp.com/courses/free-introduction-to-r

From July onwards, we can arrange upgraded access for you to Datacamp through the course Geoscripting, which gives you access to more materials. These materials can support you in further preparation for courses that assume knowledge on 'Programming in Python'. You can focus on the following modules:

Academic calendar 2023-2024

Calendar Academic Year 2023-2024

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Period	Summer Holidays		PERIOD 1							Exams	PERIOD 2							Exams
Calender week	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Monday	21-8	28-8	4-9	11-9	18-9	25-9	2-10	9-10	16-10	23-10	30-10	6-11	13-11	20-11	27-11	4-12	11-12	18-12
Tuesday	22-8	29-8	5-9	12-9	19-9	26-9	3-10	10-10	17-10	24-10	31-10	7-11	14-11	21-11	28-11	5-12	12-12	19-12
Wednesday	23-8	30-8	6-9	13-9	20-9	27-9	4-10	11-10	18-10	25-10	1-11	8-11	15-11	22-11	29-11	6-12	13-12	20-12
Thursday	24-8	31-8	7-9	14-9	21-9	5-10	12-10	19-10	26-10	2-11	9-11	16-11	23-11	30-11	7-12	14-12	21-12
Friday	25-8	1-9	8-9	15-9	22-9	29-9	6-10	13-10	20-10	27-10	3-11	10-11	17-11	24-11	1-12	8-12	15-12	22-12

4-9 Start Academic Year 2023-2024

Period	Christmas Holidays		PERIOD 3			Exams	Resit A	PERIOD 4			Exams	PERIOD 5							Exams
Calender week	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Monday	25-12	1-1	8-1	15-1	22-1	29-1	5-2	12-2	19-2	26-2	4-3	11-3	18-3	25-3	1-4	8-4	15-4	22-4	29-4
Tuesday	26-12	2-1	9-1	16-1	23-1	30-1	6-2	13-2	20-2	27-2	5-3	12-3	19-3	26-3	2-4	9-4	16-4	23-4	30-4
Wednesday	27-12	3-1	10-1	17-1	24-1	31-1	7-2	14-2	21-2	28-2	6-3	13-3	20-3	27-3	3-4	10-4	17-4	24-4	1-5
Thursday	28-12	4-1	11-1	18-1	25-1	1-2	8-2	15-2	22-2	29-2	7-3	14-3	21-3	28-3	4-4	11-4	18-4	25-4	2-5
Friday	29-12	5-1	12-1	19-1	26-1	2-2	9-2	16-2	23-2	1-3	8-3	15-3	22-3	29-3	5-4	12-4	19-4	26-4	3-5

Period	Resit B	PERIOD 6							Exams	Resit C1	Resit C2	Summer Holidays						2024-2025	
Calender week	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Monday	6-5	13-5	20-5	27-5	3-6	10-6	17-6	24-6	1-7	8-7	15-7	22-7	29-7	5-8	12-8	19-8	26-8	2-9	9-9
Tuesday	7-5	14-5	21-5	28-5	4-6	11-6	18-6	25-6	2-7	9-7	16-7	23-7	30-7	6-8	13-8	20-8	27-8	3-9	10-9
Wednesday	8-5	15-5	22-5	29-5	5-6	12-6	19-6	26-6	3-7	10-7	17-7	24-7	31-7	7-8	14-8	21-8	28-8	4-9	11-9
Thursday	9-5	16-5	23-5	30-5	6-6	13-6	20-6	27-6	4-7	11-7	18-7	25-7	1-8	8-8	15-8	22-8	29-8	5-9	12-9
Friday	10-5	17-5	24-5	31-5	7-6	14-6	21-6	28-6	5-7	12-7	19-7	26-7	2-8	9-8	16-8	23-8	30-8	6-9	13-9

Period 6 Second Half start Tuesday June 11

2-9 Start Academic Year 2024-2025

Exam Days 2023-2024

Period	Date
Period 1	23 to 27 October 2023
Period 2	18 to 22 December 2023
Period 3	1 or 2 February 2024
Resit A (Period 1+2 *)	7 to 9 February 2024
Period 4	7 or 8 March 2024
Period 5	29 April to 3 May 2024
Resit B (Period 2**+3+4)	(7) 8 and 10 May 2024
Period 6 First Half	7 or 10 June 2024
Period 6 Second Half	4 or 5 July 2024
Period 6	1 to 5 July 2024
Resit C1 (Period 5)	11 or 12 July 2024
Resit C2 (Period 6 ***)	17 to 19 July 2024

* Course code start with nr 1 or 2
** Course code start with nr 3, 4, 5 or 6
*** Exceptions possible for courses which can't be graded within 5 days. Exam day 25 or 26 July

Holidays 2023-2024

Calender week	Date	
52+1	25 December 2023 - January 5 2024	Christmas Holiday
52	25 December 2023	1st Christmas Day
52	26 December 2023	2nd Christmas Day
1	1 January 2024	New Years Day
13	29 March 2024	Good Friday
13	31 March 2024	Easter Sunday
14	1 April 2024	Easter Monday
17	27 April 2024	Kingsday
18	5 May 2024	Liberation Day
19	9 May 2024	Ascension day
20	19 May 2024	Whitsun
21	20 May 2024	Whit Monday
30-35	22 July - August 30 2024	Summer Holiday

Education	
Exam / Resit	
Selfstudy	
Holidays	

● Details regard resits will be published in the Study Handbook
● Individual courses may deviate from the general set-up