

Research Design (C004170)

Due to Covid 19, the education and evaluation methods may vary from the information displayed in the schedules and course details. Any changes will be communicated on Ufora.

Course size *(nominal values; actual values may depend on programme)*

Credits 5.0 **Study time** 150 h **Contact hrs** 62.5 h

Course offerings and teaching methods in academic year 2020-2021

A (year)	Dutch, English	Gent	microteaching	2.5 h
			lecture	10.0 h
			guided self-study	50.0 h

Lecturers in academic year 2020-2021

Van Eetvelde, Veerle	WE12	lecturer-in-charge
Van de Weghe, Nico	WE12	co-lecturer

Offered in the following programmes in 2020-2021

	crdts	offering
Master of Science in Teaching in Science and Technology (main subject Geography and Geomatics)	5	A
Master of Science in Geography and Geomatics	5	A

Teaching languages

Dutch, English

Keywords

Scientific research, research methods, scientific writing, research proposal.

Position of the course

In preparation for the execution of the master's thesis and as part of the scientific competences of an MSc student, the student learns, on the basis of an in-depth literature study into the state of the art on a subject in geography and/or geomatics, to write a research proposal that substantively is in line with the subject of the master's thesis. The research proposal is written on the basis of templates for obtaining a doctoral grant.

Contents

During the first semester, the theoretical part is discussed, in which various aspects of the research process are explained during 4 sessions:

- The general objective of scientific research and the research process
- How do you recognize and formulate clear scientific problem definition, research questions and objectives
- How do you determine the correct research methods and techniques (quantitative and qualitative research)
- How to successfully write a research proposal: guidelines
- Scientific integrity, correct scientific reporting

During the last session, the topics of the master's theses are presented from which the student can choose. The student can also propose a possible topic.

During the second semester, the student develops a research proposal of the master's thesis based on templates for obtaining a doctoral grant. This is done under the guidance of a promoter who is an expert in a specific research field in geography or geomatics. During this process, feedback opportunities are organized by the promoter at regular intervals. One joint feedback session is organized per learning track (geography and geomatics), in which each student gives a brief overview of the detailed research proposal in the presence of the supervisor and one of the Research Design lecturers. This is repeated after submission of the research proposal by a short

oral explanation of the research proposal by the student.

Initial competences

Final competences

- 1 To be able to formulate a spatial problem definition, objectives and research questions embedded in the international literature, based on a thorough and integrated knowledge of subdomains in geography and geomatics.
- 2 To collect autonomously relevant scientific information to place the research topic in geography and geomatics.
- 3 To critically approach scientific literature to support the specific scientific research question, problem definition and methodology.
- 4 To be able to select the appropriate research methods and techniques to answer the research questions.
- 5 To -develop a research proposal in which the different phases of the research process are explained, taking into account the feasibility.
- 6 Present the research project in written (in Dutch or English) and oral.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Guided self-study, lecture, microteaching

Extra information on the teaching methods

- **Lectures** (10 am): during the lectures, students are informed about the different aspects of the research process and what is expected from a research proposal.
- **Self-study** (50 hours): students independently develop a project proposal, which is evaluated throughout the process and adjusted where necessary (via contact moments with the supervisor and/or promoter of the master's thesis). Students hand in a written report, which includes the project proposal, in accordance with the format as stated in the guidelines. Students present / defend their project proposal in front of a jury of teachers.
- **Microteaching** (2.5 hours): during a session per learning line (geography and geomatics), the students give an update on the detailed research proposal in the presence of the supervisor and one of the lecturers.

Learning materials and price

Syllabus (provided digitally)

Guidelines Research Design and Guidelines Master's thesis (made available digitally)

Internationally specialized literature focussing on the theme of the thesis to support the research proposal is made available by the supervisor of the master's thesis.

References

- van der Gaast, K., Koenders, L., Post, G. (2019) Academic Skills for interdisciplinary studies. Revised edition. Amsterdam University Press
- Olsen, P.B., Pedersen, K. (2019) Problem-oriented project work. Samfundslitteratur, Denmark
- Saunders, M., Lewis, P., Thornhill, A. (2004) Methoden en technieken van onderzoek. Pearson Education Benelux

Course content-related study coaching

Students call on the lecturers of Research Design for logistical support in the development of the research proposal and the promoter of the master's thesis for the substantive elaboration.

Evaluation methods

end-of-term evaluation and continuous assessment

Examination methods in case of periodic evaluation during the first examination period

Assignment

Examination methods in case of periodic evaluation during the second examination period

Assignment

Examination methods in case of permanent evaluation

Oral examination

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible

Extra information on the examination methods

- **Non-periodic evaluation:** students present their research proposal orally in English in a maximum of 5 minutes before a jury of lecturers, and defend this for a maximum of 10 minutes.
- **Periodic evaluation:** students submit a written paper (the research proposal) that is evaluated by one of the lecturers and by the supervisor.

Calculation of the examination mark

The non-periodic evaluation counts for $\frac{1}{3}$ of the total score. Periodic evaluation counts for $\frac{2}{3}$.

Students who do not participate in the oral presentation receive a non-deliberable mark.