

Course Specifications

From the academic year 2017-2018 up to and including the

Master's Dissertation (E705002)

Course size (nominal values; actual values may depend on programme)
Credits 18.0 Study time 540 h Contact hrs 45.0 h

Course offerings in academic year 2018-2019

A (semester 2) Dutch
B (year)

Lecturers in academic year 2018-2019

Offered in the following programmes in 2018-2019	crdts	offering
Master of Science in Electrical Engineering Technology (main subject Automation)	18	B
Master of Science in Electrical Engineering Technology (main subject Electrical Engineering)	18	B
Master of Science in Electronics and ICT Engineering Technology (main subject Electronics Engineering)	18	B
Master of Science in Electronics and ICT Engineering Technology (main subject ICT)	18	B
Master of Science in Civil Engineering Technology	18	B
Master of Science in Chemical Engineering Technology	18	B
Master of Science in Electromechanical Engineering Technology	18	A, B
Master of Science in Information Engineering Technology	18	A
Master of Science in Land Survey Engineering Technology	18	B

Teaching languages

Dutch

Keywords

Master's Dissertation

Position of the course

The master's dissertation completes the master programme and is the final bridge between education and the job as an engineer. The student will independently conduct a technical-scientific research in his/her specialization. During the execution of the assignment the student develops his/her analytical and problem-solving ability on academic level. On completion of the master's dissertation, the student must be able to master the correct tools and techniques. He/she must give evidence of inventiveness, originality and craftsmanship and possess a research-oriented attitude. The master's dissertation contributes to the realization of a number of desired programme competences as defined in the programme catalogue of Ghent University.

The faculty's modalities for the master's dissertation are available via the faculty's website: <http://www.ugent.be/ea/nl/faculteit/diensten/studentenadministratie/masterproef> (in Dutch), <http://www.ugent.be/ea/en/education/master-dissertation> (in English)

Contents

The master's dissertation is a research project, consisting of the execution of an approved subject and a presentation with oral defense. The subject/assignment of the master's dissertation can be very diverse and is part of the training without excluding far limit.

In the realization of the dissertation attention is paid to the problem definition, the approach and the information processing of and by the student. In the end the student provides a master's dissertation that reflects a general critical attitude and/or research

mentality and demonstrates that he/she is able to introduce a systematic innovation. The subject of the master's dissertation can be formulated by

- research groups at Ghent University;
- the work field or research institutes;
- the student, after approval from the Study Programme Committee.

Communication:

Module 5, last module of 'Communication in five modules', inauguration of students on life after studies (working life) and preparation for the annual job fair:

- 1) Information session: required formatting master thesis in FEA + business correspondence (letters and emails) - preparation for application process (ads, drawing up cv, cover letter, job interview, personality tests, elevator pitch, etc.);
- 2) Information evening "Graduated... now what?" (work application sessions and coaching).

Initial competences

The student has an advanced knowledge of and an insight into the research field in general, and in the specialization in particular. Next to this, the student can independently gather and process information and is able to report and discuss on this information. For this course unit a mandatory succession is defined in the Curriculum Rules of the Faculty of Engineering and Architecture (cf. <http://www.ugent.be/ea/nl/onderwijs/studentenadministratie/curriculum.htm>)

Final competences

- 1 Be able to define a scientific hypothesis and make a project plan.
- 2 Show a problem-solving research attitude.
- 3 Develop/apply an adequate research method.
- 4 Apply the acquired competences of the bachelor and master programme to solve a real problem and in performing research.
- 5 Be able to obtain and apply new knowledge by self-study.
- 6 Search for scientific information and critically analyse it.
- 7 Be critical towards research results of one's own research as well as other research.
- 8 Make founded choices and decisions based on scientific results.
- 9 Communicate adequately about the master's dissertation en present the obtained results in an scientific/appropriate way to peers as well as to laymen.

Conditions for credit contract

This course unit cannot be taken via a credit contract

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Master's dissertation

Learning materials and price

- More information can be found on Minerva.
- More information on the outline of the master'dissertation can be found on the faculty' website: <http://www.ugent.be/ea/nl/faculteit/diensten/studentenadministratie/masterproef> (in Dutch), <http://www.ugent.be/ea/en/education/master-dissertation> (in English)

References

Pollefliet L., Schrijven: van verslag tot eindwerk - do's en don'ts, Gent: Academia Press, ISBN 978 90 382 2131 1

Course content-related study coaching

The supervisor will propose an advisory committee, consisting of at least two persons, including the supervisor. This advisory committee will guide the student during the project.

The student reports regularly on his/her progress (report on the daily work). The manner and frequency are agreed upon in consult with the promotor. The report on the daily work is a part of the global mark, and is evaluated by the dissertation advisory committee.

Evaluation methods

end-of-term evaluation and continuous assessment

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

Oral examination, assignment, report

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

Oral examination, assignment, report

Examination methods in case of permanent evaluation

Participation, report

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible in modified form

Extra information on the examination methods

The master' dissertation is evaluated on the basis of the written report, the daily work, as well as on the public defence and presentation of the dissertation. Each master' dissertation is evaluated by an assessment committee which comprises at least three members, being one or two supervisors and one to three members of the reading committee (commissioners). The assessment committee' composition differs from the advisory committee in at least one member. At least one of the commissioners has not been involved in the master' dissertation process.

Calculation of the examination mark

The master's dissertation is evaluated by means of a standard assessment form, available via the faculty's website:<http://www.ugent.be/ea/nl/faculteit/diensten/studentenadministratie/masterproef> (in Dutch), <http://www.ugent.be/ea/en/education/master-dissertation> (in English).

Every master' dissertation is evaluated in consensus by the assessment committee, taking into account the advice of the advisory committee.

The final score is calculated as follows (fixed percentages):

- 10% of the marks on the assessment of the personal features (creativity, effort, critical attitude, autonomy)
- 40% of the marks on the practical realization: scientific approach, technical realization, report on the daily work, result, innovative aspect
- 30% of the marks on the dissertation: scientific quality, technical quality, structure, lay-out, language, extended abstract
- 20% of the marks on the public defence: presentation, questions and answers

If the score on one of the four evaluation categories is 7/20 or less than 7/20, the committee **can** conclude, by consensus, that the student can no longer pass the entire master' dissertation. If that is the case, and if the final mark according to the calculation percentages is 10/20 (or more), the final mark will be reduced to the highest failing mark, 9/20. If these special conditions apply, a specific argumentation and a fair justification is required based on the final competences of the master' dissertation.