



Master of Science Degree Program

MSc Thesis, Final Examination, and Degree Certificate

Faculty of Electrical Engineering and Informatics, BME

Embedded in the BME Code of Studies
(Annex of the recommended curriculum)

7th July 2017

The following regulations include the regulations regarding MSc thesis, final examination and degree certificate of the Faculty of Electrical Engineering and Informatics of BME embedded in the BME Code of Studies (CoS) in an integrated structure. The referred sections and points of CoS correspond to the valid version of the date it came into force. In case the CoS is altered in any way, the referred parts are automatically changed with the legislation in force.

MSC THESIS

CoS Section 96

- (1) To obtain a degree certificate, students are required to write a bachelor or master thesis for subjects holding specific credits defined in the training and outcome requirements and the curriculum.
- (2) Students will write an independent bachelor or master thesis for each programme (training).
- (3) The topic of the bachelor, master thesis is required to be within the framework of the training and outcome requirements.
- (4) In case of programmes defined in point a) of Section 7 (1), students will write a bachelor thesis while in case of programmes defined in point b) and c) of Section 7 (1), students will write a master thesis.

- 1) Diploma Thesis Designs (henceforth: Thesis 1 and Thesis 2) are subjects related to the main or secondary specialization of the student.
- 2) Students can only register for Thesis 1 if they have the credits of Project Laboratory 1 and 2.
- 3) Students can only register for Thesis 2 if they have completed 84 credits and have obtained the credits of Thesis 1.
- 4) Further requisites of the registration of MSc Thesis Design 2 are:
 - a) in case of Computer Engineering curriculum, completing the credits of the following subjects
 - i) Applied algebra and mathematical logic (BMETE90MX57)
 - ii) System optimization (BMEVISZMA02)
 - iii) Languages and automata (BMEVISZMA04)
 - iv) Information theory (BMEVISZMA03)
 - v) Formal methods (BMEVIMIMA07)
 - b) in case of the Electrical Engineering curriculum, completing the credits of the following subjects
 - i) Two advanced mathematics subjects (according to the main specialization of the student)
 - ii) One of the Common Subjects (Communication theory BMEVIHVMA07 or Measurement theory BMEVIMIMA17 or Alternating current systems BMVIVEMA13)
 - iii) Natural Science subject (Electromagnetic Fields BMEVIHVMA08 or Photonics Devices BMEVIETMA06 or Electrical Insulations and Discharges BMEVIVEMA14)
- 5) Conditions of the MSc Diploma Thesis Design subject registration is checked by the Dean's Office and the Central Academic Office.



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- 6) Thesis 1 and 2 can be taken both in the spring and fall semesters. Students need to continue work throughout the second semester which they have begun previously.
- 7) The supervisor opens the Thesis topic on the Thesis Portal (<https://diplomaterv.vik.bme.hu/en/>). The student needs to enter the portal and accept the announced topic. After the closing of a successful first semester, the supervisor opens the same topic in the following semester which the student signs up by filling an online form in the semester of Thesis 2.
- 8) The steps of finalizing the topic of the thesis in the semester of Thesis 1 on the Thesis portal are as follows:
 - a) The supervisor opens the Thesis topic for the student on the Thesis Portal until the end of the 3rd week of the study period
 - b) The supervisor uploads the thesis topic description until the end of the 5th week of the study period.
 - c) The thesis topic description is approved by the head of the department until the end of the 6th week of the study period.
 - d) The student submits the electrical version of the Thesis 1 report via the Thesis portal until the last day of the study period.
 - e) The supervisor accept the report on the Thesis portal
- 9) The steps of finalizing the topic of the thesis in the semester of Thesis 2 on the Thesis portal are as follows:
 - a) The topics are reopened by the supervisor until the end of the 3rd week of the study period
 - b) Sometimes the topic assignment can be slightly modified in which case the supervisor uploads the modified topic assignment until the end of the 5th week which has to be approved by the head of the department until the end of the 6th week of the study period.
 - c) Students upload the electronic thesis form until the end of the 6th week of the study period which also includes the selection of subjects of the final exam.
 - d) The supervisor approves the students' forms.
 - e) The student submits the electrical version of the MSc Diploma Thesis on the Thesis portal until the last day of the study period.
 - f) The supervisor accept the MSc Diploma Thesis
- 10) The thesis topic can be selected from the announced topics of the department of the main or secondary specialization. The topics need to be approved by the head of the department.
- 11) A topic announced by a different faculty, university or company can only be accepted if the head of the department of the main or secondary specialization supports it and provides a department supervisor. An external advisor of academic qualifications must have an MSc degree and be approved by the head of the department. The topic of the thesis has to be selected and written so that it can be evaluated without violating the interests of the company.

CoS Section 96

(6) The writing process of a bachelor or master thesis is controlled by a supervisor whose work may be supported by engaging a thesis advisor

CoS Section 99

(1) The thesis advisor is primarily an employee of a company or institution outside of the university who provides professional help and advice for the student and checks the student's thesis

- 12) The writing process of the thesis is guided by the departmental supervisor or an external thesis advisor both of whom have to be provided. A departmental supervisor is someone who is a full or part-time teacher, researcher, departmental engineer, doctoral candidate or doctoral student. An external thesis advisor can be an external expert with academic qualifications or with MSc degree having an approved consent of the head of the department.



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CoS Section 96

(1) Subjects related to the writing of a bachelor or master thesis are mandatory subjects evaluated with mid-term grades. The grade for a subject is determined by the supervisor based on a student's achievement in the term and the subject requirement or the faculty regulations. Unless otherwise specified by the faculty regulations, the completion and submission of a bachelor or master thesis until the end of the term is not required to award a grade other than fail.

- 13) The requisite for Thesis 1 is a mid-term grade during the study period which can only be achieved if the preparation has been accomplished and the student is ready to continue work with Thesis 2. Further requisites of the subject and the method of evaluation is included in the subject data sheet. The supervisor accepts a written thesis report uploaded by the end of the semester.
- 14) The requisite for Thesis 2 is a mid-term grade during the study period. The submission of the thesis is not a requirement of having a mid-term grade. The subject is completed if the preparatory work has been done throughout the two semesters and the thesis will be completed without the help of the supervisor or the thesis advisor. Further requisites of the subject and the method of evaluation is included in the subject data sheet.
- 15) The deadline for thesis submission is the last day of the study period followed by the exam period during which the student wants to defend his/her thesis. The grade is given by the Final Examination Board.

CoS Section 101

(1) The bachelor or master thesis prepared by the student and accepted by the supervisor must be checked by a reviewer. The review criteria, as well as its content and formal requirements will be specified by the faculty's code. The reviewer makes a suggestion for the grade of the thesis. This can also be a 'fail (1)'.

- 16) The reviewer must have an MSc degree or a degree equivalent to it.

CoS Section 102

(1) The university regards it as a primary goal to ensure the public availability of bachelor or master theses in order to realise the programme's objectives, therefore accessibility may be restricted in exceptional cases only.
(2) The students' theses, together with all supplements, are publicly available in the library of the educational organisational unit which announced the assignment for the thesis or in the faculty's designated IT system. No copies of the thesis or parts thereof can be made without the prior written consent of the student it was written by.

CoS Section 103

(1) The restriction of the public availability and accessibility of the thesis may be initiated by the supervisor and requested by the head of the competent educational organisational unit by sending a written request to the dean of the faculty in charge of the programme in question.

- 17) In some cases, leading companies in the field of research and development may announce confidential thesis topics. The confidentiality of the topic needs to be permitted by the MSc Program Director at the request of the head of the department. The permission must be issued by the end of the previous study period. Students must be informed of the confidentiality of such topics in case they select one. Confidential thesis topics are public, but their contents and annexes must not be made public.
- 18) All information regarding the preparation and submission of the thesis is included in the subject data sheet of Thesis 1 and 2.



FINAL EXAMINATION

CoS Section 104

(1) Students complete their bachelor, master or single-cycle training programme and postgraduate specialist training programme by taking their final examinations.

(2) Students may take the finals after they have obtained their leaving certificate. Students may take the final examination after obtaining their leaving certificate. The final examination may be taken in the exam period after the leaving certificate (absolutorium) was obtained both within the framework of the student's legal status and after its expiry within a period of two years in any given exam period in accordance with valid academic requirements.

(3) After the expiration of the second year following the issue of the leaving certificate (absolutorium) students may take their final examinations if the programme owner approves the bachelor thesis subject as currently relevant after consulting with the head of the educational organisational unit organising the final examinations and the person in charge of the specialisation (if any). If the topic is deemed to be obsolete, the applicant must write a new bachelor thesis.

(4) Final examinations may not be taken after the end of the fifth year following the termination of the student's legal status.

(5) Students may not take their finals, if they

a) failed to settle their payment obligations towards the University,

b) failed to return any equipment owned by the University and previously given to the students for use or

c) failed to submit their bachelor or master thesis by the specified deadline.

19) The conditions of taking a final examination are as follows:

a) The student needs to upload his/her thesis on the portal and submit a bound copy of it to the supervisor.

b) The supervisor needs to find the thesis adequate for submission and accepts the thesis (closed the topic) on the portal.

c) The departmental coordinator of the final defense assigns the student to the final examination.

CoS Section 106

The faculty in charge of the programme designates a final examinations period in the SAS, for which the students can register. Only students who registered for the final examinations period may take the final examinations. The educational organisational units designate final examination dates within the final examinations period.

20) Final examination can be taken in both semesters, usually in the last 3 weeks of the exam period.

CoS Section 106

(2) Students or former students can register for these final examination dates, announced in the SAS for the final examinations period by using the Study Administration System or students can be registered also by the educational organisational unit (EOU) organising the final examinations.

(3) Students or former students may cancel their registration by no later than 24 hours prior to the start of the final examinations in person or by sending an e-mail to the EOU organising the final examinations. If the students or former students fail to turn up at the finals, their learning outcomes cannot be evaluated. This fact must be entered in the minutes of the final examinations.

(4) The reason for the absence from the finals must be verified within eight days of the finals at the in charge. In case of an unexcused and unverified absence the student will have one less available repeat options for the final examinations.



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CoS Section 105

(5) *The final examinations will be organised by the educational organisational unit in charge of the student's specialisation. If the programme does not have a specialisation, the finals will be organised by the educational organisational unit (EOU) announcing the bachelor or master thesis topic.*

(6) *Finals may be organised jointly by EOUs, including the EOUs of other higher education institutions, based on their agreement.*

- 21) The department announcing the thesis topic is responsible for the organization of final exams.
- 22) The department may schedule the final exams at any time period within the 3-week exam period.

CoS Section 105

(3) *The final examination will test the students' synthesised knowledge and will consist of several parts – such as defending the bachelor or master thesis and exams per subject or subject group, as well as final comprehensive examinations – in accordance with the criteria set out in the curriculum.*

- 23) The student defends his/her thesis in front of the Final Examination Board. The reviewer, invited by the department, assesses the thesis and offers a grade. Similarly, the departmental supervisor evaluates the thesis as well as the performance of the student throughout the semester and offers a grade. The assessment can either be oral or written. In case the supervisor cannot be present during the defense, the assessment must be written.
- 24) In the case of a confidential thesis, the Final Examination Board holds a closed session where each member must sign a privacy statement. The candidate has to answer all professional questions that may arise.
- 25) The reviewer or the departmental supervisor must be present on the session of the defense. The review itself must be available to the candidate before the defense. The supervisor may be dispensed from being present with consent from the head of the department.
- 26) The student takes the final exam from two subjects. The subjects are assigned by the supervisor of the department responsible for the thesis which has to make sure that at least one of the subjects should relate to the thesis.
- 27) At the Computer Engineering program, the two subjects can be selected from the list of the student's completed common subjects (Applied algebra and mathematical logic BMETE90MX57, System optimization BMEVISZMA02, Languages and automata BMEVISZMA04, Information theory BMEVISZMA03, Formal methods BMEVIMIMA07) or from the subjects of the main and secondary specialization. One of the subjects must be the subject of the main specialization.
- 28) At the Faculty of Electrical Engineering, the two subjects can be selected from the list of the student's completed subjects of Advanced mathematics, Common Subjects (Communication theory BMEVIHVMA07 or Measurement theory BMEVIMIMA17 or Alternating current systems BMVIVEMA13), Natural Science subject (Electromagnetic Fields BMEVIHVMA08 or Photonics Devices BMEVIETMA06 or Electrical Insulations and Discharges BMEVIVEMA14) or from the subjects of the main and secondary specialization. One of the subjects must be the subject of the main specialization.
- 29) The oral exam of the final exam subjects has to be taken directly after the defense of the thesis in front of the Final Examination Board. The student can only take the exam if the defense was successful.
- 30) The Final Examination Board returns the printed copy of the thesis to the student.
- 31) Confidential theses will become public 3 years after successful exams. The operator of the Portal is responsible for making theses public.
- 32) The Central Academic Office records the partial results of the final exam and the qualification of the certificate based on the minutes of the exam.



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CoS Section 107

(5) The results of the final examinations are announced by the chairperson of the Final Examination Board at an open session.

(6) The final examinations are deemed as successful if the examinee has completed each part with a minimum pass grade.

(7) A successful final examination cannot be retaken.

CoS Section 109

(1) A thesis graded as failed by the finals committee may be repeated once by submitting a new bachelor or master thesis. If a new bachelor or master thesis is submitted, the earliest time for taking another final examination is the next final examinations period.

(2) The criteria and deadline for preparing and submitting a new bachelor or master thesis will be specified by the dean of the faculty in charge of the programme, based on the opinion of the head of the educational organisational unit organising the finals.

33) In the case of the unaccepted thesis, the Final Exam Board can specify its correction and repeated preparation.

CoS Section 109

(3) If only one of the exams in the final examination subjects was unsuccessful, the examinee only has to sit a retake exam in that subject. There is an option for a repeated retake exam after an unsuccessful retake exam. After that there are no other options available for retakes. Failed first or repeated retake exams in a subject cannot be repeated within two months of the failed exam.

CoS Section 108

(1) The results of the final examinations (RFE) are calculated as follows: $0.5 \times \text{AGS} + 0.5 \times T$, where AGS is the average of the grades of the subjects of the final examinations and T is the grade given for the bachelor thesis.

(2) The final examination is unsuccessful and the RFE is zero if any of the grades given at the final examination is a fail.

DEGREE CERTIFICATE

CoS Section 110

(1) Based on a successful final examination the University issues a degree certificate for the student in Hungarian and English, with the contents stipulated by the government decree, within 30 days following the successful final examination or within 30 days following the presentation of a document attesting the language exam if the latter is presented after the final examinations.

(2) In the case of foreign-language programmes the degree certificate must be issued in Hungarian and in the language of the programme.

(3) Based on a successful final examination, providing the student met all the criteria for issuing the degree certificate, the data manager will issue a certificate for the issue of the degree certificate, the content of which is stipulated by the government decree.

CoS Section 111

(1) The result of the degree certificate must be rounded up to two decimals, but partial grades should not be rounded up.

(2) The following formulas must be used for the calculation of the degree certificate result:

a) $0.2 \times \text{AGS} + 0.3 \times T + 0.3 \times \text{GPA} + 0.2 \times \text{CE}$ if the curriculum also prescribes the completion of comprehensive exam(s) during the studies,

b) $0.2 \times \text{AGS} + 0.3 \times T + 0.5 \times \text{GPA}$ if the curriculum does not prescribe the completion of comprehensive exam(s) during the studies, where CE is the mathematical average of the comprehensive exam grades required for the degree certificate, GPA is the cumulative grade point average for the whole of the study period, while the definitions of AGS and T are applied according to Section 108 (1).



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CoS Section 112

(1) The classification of the degree certificate must be calculated by using the degree certificate result, rounded up to two decimals, as follows:

- a) excellent, if the grade is at least 4.50,*
- b) good, if the grade is at least 3.50, but less than 4.50*
- c) satisfactory, if the grade is at least 2.50, but less than 3.50,*
- d) pass, if the grade is at least 2.00, but less than 2.50.*

(2) The degree certificate is classified as excellent with distinction, if the examinees

- a) have an excellent grade in all subjects of the final examination,*
- b) their thesis received an excellent grade in the finals,*
- c) all their comprehensive exam results, required for the degree certificate (if any) were graded excellent and*
- d) their cumulative grade point average for the whole study period is at least 4.25.*

(3) A fail (1) grade subsequently replaced by a first and repeated retake exam or a reregistration for the subject does not exclude the issuance of an honours degree.

CoS Section 113

A diploma supplement, specified by the European Commission and the Council of Europe, must also be issued free of charge with the degree certificate in Hungarian, English and in the programme's language if different from Hungarian and English.

34) The graduation ceremony takes place at the given time according to the academic calendar.

COPYRIGHT

CoS Section 92

(1) The works of another person will be used as follows:

- a) if a work of another person is used in whole or in part (e.g. by copying, citation, translation from another language or presentation), the source and the name of the author will be indicated if this name is included in the source or – in case of orally presented works – may be clearly identified;*
- b) the work of another person or any part of that will be used – up to a quantity reasonably corresponding to the nature and purpose of the student work – identified as quotations.*

(2) Instructors are entitled to review compliance with requirements in this article with computer programmes and databases.

(3) The use of works of another person and the acknowledgement of use will be governed by applicable laws and the relevant rules of the specific discipline.

CoS Section 93

(1) If a student fails to meet rules regarding use of works of another person in whole or in part, the student work will be considered as not assessable and the student will not be allowed to obtain the credit of the concerned subject in the specific term.

(2) It will be deemed a disciplinary offence if a student – in breach of the rules regarding use of works of another person - submits or presents a work of another person fully or in a significant part verbatim (word for word) or in terms of its basic concepts or the combined version of several works of another person(s) as their own work

(3) Based on subsection (1) of Section 52/A. of the Higher Education Act, compliance with the rules regarding the use of works of another person in a master thesis may be reviewed up to five years following the issue of the degree certificate. In case of violation of the above rules, section 52/A of the Higher Education Act will apply.

35) Any content from external sources must be stated in the students own words AND accompanied by citations. Copying and pasting from an external source should be avoided and any text copied must be placed between quotation marks. Reports that violate these rules cannot receive a passing grade.