

RULES FOR MSc PROGRAMMES AT REYKJAVIK UNIVERSITY'S SCHOOL OF SCIENCE AND ENGINEERING

As revised 15th August 2017.

These rules describe the objectives, structure and requirements for studies towards a Master of Science (MSc) degree in the School of Science and Engineering at Reykjavik University. The programmes leading to a MSc degree include programmes in engineering, applied sciences in fields related to engineering and a programme in Exercise Science and Coaching. The rules do not apply to other degrees awarded by the SSE at the master level, such as MEd in Sport and Health education and MPM (Master of Project Management). MSc degree programmes offered are listed in Appendix 1.

Article 1 General

The Reykjavik University School of Science and Engineering awards MSc degrees in science and engineering following the satisfactory completion of structured second cycle studies. The MSc programmes are 2 year [120 ECTS] graduate programmes for students who have completed a 3 year [180 ECTS] bachelor degree in engineering or a relevant discipline. A student wishing to complete a MSc in engineering must hold a BSc degree in engineering or else complete additional coursework fulfilling preparatory requirements in the relevant engineering discipline.

Article 2 Objectives and Emphasis

The principal objectives of the Master's programmes are:

- To foster analytical and critical thinking for the solution of problems and projects in the relevant field and to train students in scientific work methods.
- To enhance the students' basic knowledge of the relevant subject and broaden this knowledge in specific areas through each individual's selection of courses.
- To enable students to obtain considerable specialization. The Master's programmes are research-oriented with an emphasis on independent work under the supervision of faculty members.
- To contribute to the personal fulfilment and growth of each student.

The Master's programmes place a special emphasis on:

- A sound theoretical foundation and an academic approach which provides students with the appropriate tools to tackle a range of different projects and improves their skills in interdisciplinary collaboration.
- Practical studies and applied research in close collaboration with industrial enterprises and institutions in the fields concerned.
- Interdisciplinary collaboration with other graduate programmes at Reykjavik University.
- International studies in collaboration with universities and enterprises abroad.

Article 3 Accredited Professional Titles and Qualifications

A student graduating with a MSc degree in engineering from the Reykjavik University School of Science and Engineering has completed studies fully pursuant to Act no. 8/1996 defining the right to use the professional title of Chartered Engineer (Icelandic: verkfræðingur), provided the requirements of the Association of Chartered Engineers in Iceland (Icelandic: Verkfræðingafélag Íslands) concerning the composition of courses and the total number of credits taken are also met. See www.vfi.is.

Requirements for the right to use the professional titles within the teaching profession (Icelandic: Leikskólakennari, grunnskólakennari og framhaldsskólakennari) are stated in Act no. 87/2008 and Regulations no. 872/2009. An individual seeking a licence of a teacher's certificate must have finished a minimum number of ECTS-credits in pedagogy and within the relevant subject and specialisation. The teachers' certificate is thereby dependent on the content of individual previous Bachelor degrees as well as on the master degree. The MSc in Exercise Science and Coaching fulfills these requirements, given that the individual's studies at the bachelor level also fulfill requirements stated in Act no. 87/2008 and Regulations no. 872/2009.

Article 4 Entry Requirements

Applicants for MSc programmes at the Reykjavik University School of Science and Engineering shall generally have completed a BSc degree in science or engineering of at least 180 ECTS credits from Reykjavik University or a comparable degree from an accredited university. Applicants shall generally have passed their BSc examinations with excellent or very good grades and/or show promise in other respects.

Department Heads (sviðsstjórar) of the School of Science and Engineering shall evaluate applications to their departments and recommend to the Director of Graduate Studies (forstöðumaður meistaranáms) which applicants shall be accepted. The Director of Graduate Studies reviews applications and accepts, rejects or forwards applications to the Graduate Studies Council for further assessment, as appropriate. The Graduate Studies Council (námsmatsnefnd meistaranáms) shall set rules for procedures of their evaluation of applications.

The Graduate Studies Council may specify additional requirements whereby a student may be obliged to complete certain courses at undergraduate level or achieve higher grades than generally required in parts or the entirety of a Master's programme.

When considering applications to MSc programmes from applicants with a bachelor's degree in a discipline other than the masters programme that is applied for, the Graduate Studies Council shall decide whether the applicant has to complete additional preparatory coursework before entering the master's programme.

Article 5 Application Deadlines

The MSc programmes shall generally commence in January for the spring semester and in August for the fall semester. Deadlines for applying for enrolment in a programme are decided in concert with other graduate programmes at Reykjavík University. Decisions on applications, conditional or unreserved, shall be available no later than 30 days after the application deadline. Reykjavik University reserves the right to accept late applications under exceptional circumstances.

Article 6 Study Components

The following study components may yield credits in MSc programmes at the Reykjavík University School of Science and Engineering:

- a) Courses within a MSc programme as listed in the course catalogue, cf. Article 7.
- b) Studies under student exchange programmes, cf. Article 13.
- c) Studies in other universities or Schools at Reykjavik University or in other fields than science and engineering cf. Article 14.
- d) Master's thesis, cf. Article 15.
- e) Electives from advanced undergraduate curricula at Reykjavík University's School of Science and Engineering, i.e. courses which are specially defined as being admissible as graduate courses, may earn students enrolled for Master's studies up to 18 ECTS credits as part of their Master's studies. Such electives or comparable study components shall, however, not have constituted a

part of the student's previous undergraduate studies (exemption see Article 6(f)). The Graduate Studies Council shall decide whether a course which a student wishes to have evaluated as part of his/her Master's studies is comparable in substance to a study component of a student's undergraduate studies. Other undergraduate courses or undergraduate courses chosen from other Schools within Reykjavik University are generally not admissible, although a student may apply to have such courses of up to 12 additional ECTS evaluated, to strengthen the student's knowledge in specific subject, if deemed necessary by the student's department head. Such a request needs to be approved by the Graduate Study Council. Credits cannot be earned for courses from the undergraduate curricula of other universities. A list of possible electives from the undergraduate curriculum shall be available.

- f) Students who have completed a bachelor's degree of more than 180 ECTS may apply to have up to 30 ECTS of credits, which are defined as being admissible as graduate courses, and taken in their last year of undergraduate study evaluated as part of their graduate studies. Each Department of the School of Science and Engineering may set specific rules regarding this type of evaluation.
- g) In no case can the total amount of credits evaluated (cf. Art. 6(e) & (f)) as part of a Masters programme exceed 30 ECTS.
- h) In order to graduate from Reykjavik University, a student shall have taken at least 50% of the total credits earned within his study programme at Reykjavik University.

Article 7 Weight of Individual Study Components

The required core courses for each study programme shall be clearly defined in the course catalogue. A minimum $\frac{2}{3}$ of the course-credits (excluding credits for the Master's thesis) earned by a student enrolled in a MSc programme at the School of Science and Engineering shall come from science and engineering subjects. A student may earn up to $\frac{1}{3}$ of the requisite credits from selected courses within other academic disciplines. A list of possible electives from the curricula of the Schools of Science and Engineering and other Schools at Reykjavik University shall be published in the course catalogue for the MSc programme.

Courses offered within the Reykjavik University School of Science and Engineering shall generally be regarded as science and engineering subjects unless otherwise stated. The Graduate Studies Council determines whether courses offered by other Schools within Reykjavik University or other domestic or foreign universities count as science and engineering subjects as defined above.

All students enrolled in a MSc programme shall submit a Master's thesis designed to earn either 30 or 60 ECTS credits. In all other respects, the composition of studies shall be in accordance with the School's curriculum as published in the course catalogue.

Article 8 Course Options

Department Heads shall, prior to February 1st each year, recommend to the Director of Graduate Studies the courses to be offered over the next two academic years, in consultation with members of their faculty. The Director of Graduate Studies shall, prior to March 1st each year, decide what courses shall be offered during the period. In their proposals, the Department Heads shall recommend a total of at least 3 courses to be offered each semester within each Master's programme. Course descriptions with information on learning outcomes, teaching methods, evaluation methods and other arrangements shall be available at the same time.

The School shall not be bound to teach an elective course if fewer than 10 students have registered for it at the end of the registration period. The School may, however, teach elective courses and seminars for which fewer students have registered. The Director of Graduate Studies makes decisions to that effect having consulted the Department Heads involved. Decisions on elective courses to be offered during each semester shall be made no later than 4 weeks before the beginning of the semester. Due to unforeseen circumstances, the Director of Graduate Studies may decide to cancel a course. It shall be made clear in the course catalogue in which semester and at which intervals each course is normally offered.

Article 9 Study Plans

A student who has been admitted to a Master's programme shall, no later than 6 weeks before studies are due to commence, select courses for the first semester. Before the end of the first semester the student shall submit a comprehensive study plan to the Department Head of the program for which the student has been admitted. Detailed study plans shall accompany requests for evaluation of previous studies to the Graduate Studies Council if applicable. The study plan needs to be accepted by the Department Head and the Director of Graduate Studies. Students shall inform the Department Head of their proposals for subject matter of the Master's thesis before commencing their second year of study. Students are responsible for timely fulfilment of the requirements of the study plan. Changes to the study plan need to be accepted by the Department Head and the Director of Graduate studies.

Article 10 Study Progress

Students shall complete their Master's studies no later than four years after their commencement, unless the Graduate Studies Council has permitted a slower progress or granted a leave of absence from the studies. Only in exceptional cases can such extensions be granted for periods longer than one year.

Article 11 Minimum Grade

The minimum passing grade in the Master's programmes is 6.0 in all courses.

The minimum grade for courses evaluated at re-enrolment is 7.0. This requirement shall generally also apply to any previous studies evaluated/transferred from other universities or programmes as part of the Master's programme.

Article 12 Teaching and Assessment

One ECTS course credit in a Master programmes at the School of Science and Engineering usually equals 7-10 hours of teaching, i.e. 42-60 hours of teaching for a 6 ECTS-credit course and 56-80 hours of teaching for an 8 ECTS credit course. One ECTS credit corresponds to a total student workload of 25-30 hours. This shall be used as a guideline for assessing student workload outside teaching hours and the total workload of each course.

The Director of Graduate Studies shall, in collaboration with the relevant Department Heads, decide on new courses to be taught and major revisions of existing courses. This includes the number of credits to be awarded for each course. Courses at the School of Science and Engineering shall generally earn a student 6, 8 or 10 ECTS credits.

Courses are generally under the supervision of faculty members as decided upon by the relevant Department Head. Teachers in the MSc programme shall have a Master's degree, a comparable degree or higher academic qualifications.

Courses shall comprise lectures/seminars, projects and laboratory work as decided upon by the supervising faculty member in each case. The supervising faculty member shall decide on the manner of evaluation, including whether written or oral examinations shall be given, and whether a course shall, in part or in its entirety, be completed by submitting a project, term paper or presentation. In other respects, Reykjavik University's general rules on study and examination shall apply.

Article 13 Studies in Student Exchange Programmes

Students can earn up to 60 ECTS credits in their Master's studies at other universities on the basis of student exchange programmes in which the Reykjavik University School of Science and Engineering participates. A student planning to study at another university as envisaged in this paragraph shall seek the approval of the Department Head before commencing the studies. The performance of students in studies at other universities shall be evaluated on the basis of the requirements of the university where the studies were conducted. The results of the evaluation shall be registered in their progress file as satisfactory or inadequate, without the award of numeric grades, and shall therefore not affect the

student's average grade. As stated in art. 6 (h), a student shall have taken at least 50% of the total credits earned within his study programme at Reykjavik University in order to graduate from Reykjavik University.

Article 14 Evaluation of Prior Studies in other Study Programmes at RU or from Other Universities

If a student has finished courses at university level which he wishes to have evaluated as part of his Master's studies, he shall apply for this before the end of the first semester. Students may earn up to 60 ECTS credits in their Master's studies through studies at a university other than RU. Second cycle courses which contain equivalent subject matter and have been taken at a recognized university will generally be evaluated as equivalent to applicable courses in a Master's programme at RU. The Graduate Studies Council decides which courses are equivalent. A student can have up to 12 ECTS credits of second cycle courses from other universities outside the field of science and engineering evaluated as electives. First cycle credits from other universities than RU shall not be evaluated as part of the Master's studies (see also Article 6).

The performance of students in evaluated courses taken outside RU shall be registered in their progress file as passed, without the award of numeric grades.

Article 15 Master's Thesis

MSc students shall work on a thesis designed to earn 30 ECTS credits during their final semester in the Master's programme or a thesis earning 60 ECTS credits during the last two semesters. See art. 12 on workload for ECTS credits.

The student can organize the work on a Master's thesis over a longer period of time if appropriate and scheduled in the student's study plan. The Graduate Study Council shall issue rules in further detail concerning the requirements to be made on MSc theses, the scope of the projects, deadlines and accompanying documents.

A thesis earning 30 ECTS credits

All students conducting MSc studies at the Reykjavik University School of Science and Engineering shall submit a Master's thesis designed to earn at least 30 ECTS credits. This thesis shall fulfil the following requirements:

- Its subject shall have bearing on the relevant field of science and engineering and related fields and/or address research questions in those fields.
- Its preparation shall involve academic use of relevant sources, primary or secondary, as appropriate to the subject.
- The thesis shall attain the goals set by the student as approved by the supervisor before the thesis work commenced. The goals shall be clearly stated in the introduction to the thesis.

A thesis earning 60 ECTS credits

A student conducting MSc studies who has been granted approval by the supervising faculty member may apply to the Department Head of the programme to be allowed to submit a Master's thesis designed to earn 60 ECTS credits instead of a thesis earning 30 ECTS credits. The thesis shall fulfil the following requirements:

- Its subject shall have bearing on the relevant fields of study and/or address research questions in those fields. The thesis shall be the student's own intellectual exploration, making a notable and independent contribution to the field or fields concerned.
- The thesis shall involve a test of a hypothesis made by the student in response to a research question forming its foundation.
- Original and derived sources shall be used to support or refute the student's hypothetical reply to his or her research question.

- The scope and standard of the thesis shall be such that it could obviously lead to a publishable, peer-reviewed paper.

A faculty member shall in all cases act as supervisor in each Master's thesis. If applicable, there can be two supervisors; a faculty member and an external specialist in the subject area of the thesis. The supervisors shall have a Master's degree or comparable academic qualifications, or a higher academic degree. The supervisor/s shall evaluate the thesis together with an examiner appointed by the Director of Graduate Studies. They shall also submit the candidate to an oral examination on the thesis in an open forum. A grade shall be awarded for the thesis on the same scale as for courses taken at the School of Science and Engineering.

The Graduate Studies Council shall issue further rules concerning Master's theses, their submission, oral defence and grading.

Article 16 Other Rules

For master level studies at the School of Science and Engineering, university-wide RU rules on master level studies also apply.

Appendix I:

MSc Programmes at Reykjavík University School of Science and Engineering – SSE

- MSc in Biomedical Engineering
- MSc in Civil Engineering
- MSc in Electrical Engineering
- MSc in Engineering Management
- MSc in Exercise Science and Coaching
- MSc in Financial Engineering
- MSc in Mechanical Engineering
- MSc in Sustainable Energy Engineering - ISE
- MSc in Sustainable Energy – ISE

Other Master Programmes in Reykjavík University School of Science and Engineering – SSE

- MEd in Sport and Health Education (special rules apply)
- Master of Project Management (MPM) (special rules apply)

Revised edition approved by the School Council of the Reykjavík University School of Science and Engineering August 15, 2017. First approved at the School Council on March 27th 2008, amended November 23rd 2010 and August 28th 2012.