APPROVED by Council Resolution of 5 November 2024 (Minutes No. 1-3/24/13)

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# Estonian Aviation Academy Rules for Organising Activities Related to Graduation Theses and Final Examinations

#### 1. General Provisions

- 1.1. These rules for organising activities related to graduation theses and final examinations (hereinafter "the rules") at the Estonian Aviation Academy (hereinafter "Academy") establish the conditions and procedure for activities related to graduation theses and final examination.
- 1.2. The rules have been drawn up based on § 6 of the Standard of Higher Education.
- 1.3. A graduation thesis is an independent implementation-oriented research which is carried out by a student under the supervision of a supervisor, and deals and solves a topical issue of the corresponding field.
- 1.4. The aim and learning outcomes of the graduation thesis have been described in curricula.
- 1.5. Generally, a graduation thesis is completed in Estonian. On the basis of a substantiated application submitted by the student and with the consent of the Vice Rector for Education and Research, the graduation thesis may be completed in English. In the application, the student provides the title of the thesis, supervisor(s) and consultants, and explains the reasons for writing the thesis in English. Where the need for preparing the thesis in English derives from a specific organisation, a letter of support from that organisation is provided along with the application.
- 1.6. As a rule, the thesis is completed alone, but with the consent of the theses topics committee and the supervisor(s), writing a thesis in pairs may be permitted. In this case, the original and proportionate contribution to the completion of the work made by each author at each stage of the process is described in the author's declaration. In the theses completed in pairs, a corresponding work load of each author must be detectable (e.g., by a more complex or diverse methodology or more comprehensive data).
- 1.7. The final examination evaluates the student's knowledge and skills. The final examination may be arranged in a written and/or oral and/or practical form and in Estonian and/or English. The aim of the final examination is to evaluate whether the student has achieved the learning outcomes listed in the curriculum.

### 2. Topic and volume of graduation theses

- 2.1. Selecting the topic of the graduation thesis and stating the reasons for the selection is the task of the student. The topic of the graduation thesis may be proposed by the student, a member of the academic staff of the Academy, an academic structural unit (hereinafter "academic department"), R&D council, enterprises or institutions.
- 2.2. The topic of the thesis must correspond to the aim specified in the curriculum, be topical and related to the field of study of the student. The methodology of graduation theses compiled by the students of the Aeronautical Engineering curriculum must be based on an experiment and/or engineering analyses and/or mathematical modelling.
- 2.3. In the selection of the topic and supervisor, the student is advised by the head of the academic department or a person appointed by the latter.
- 2.4. The length of the main body of the thesis (introduction, chapters, summary) is 20–25 pages. The volume of the appendices is not restricted.
- 2.5. Graduation thesis with restricted access
  - 2.5.1. For the protection of state or business secrets or technological solutions, the Vice Rector for Education and Research may restrict access to the graduation thesis by an order issued on the basis of a written substantiated application submitted and signed by the student. The defence of the graduation thesis with restricted access is closed to the public and a notation indicating restricted access is added to the defence schedule.
  - 2.5.2. An application for restricting access to the information provided in the thesis along with a written request of the corresponding organisation is submitted by the author of the thesis to the Academy's Vice Rector for Education and Research at least within three work days before the preliminary defence of the thesis, and on the proposal of the Vice Rector for Education and Research, the Rector's Decree on imposing restricting access is issued.
  - 2.5.3. Based on the Rector's directive, the author of the thesis adds a notation to the title page of the thesis which includes, inter alia, the name of the holder of information, grounds for the access restriction, and the dates indicating the beginning and end of the restriction.
  - 2.5.4. When the reason for restricting access continues to exist, the term of restriction may be extended by up to five years by a decision of the Vice Rector for Education and Research.
  - 2.5.5. The graduation thesis with restricted access is made available to the members and the secretary of the (preliminary) defence committee, the supervisor, consultant and reviewer of the thesis, and an employee performing acts related to the thesis until the final date of the restriction.
  - 2.5.6. By the order of the Vice Rector for Education and Research, the right of access is granted to persons specified in clause 2.4.5, who sign an agreement on ensuring confidentiality or confirm in the document management system that they are aware of the access restriction imposed on the thesis and undertake not to disclose to third parties any information on the thesis classified as information intended for internal use.
  - 2.5.7. In addition to the author of the thesis, only the persons specified in clause 2.4.5 may participate in the closed (preliminary) defence.

## 3. Supervising, consulting and reviewing the graduation thesis

- 3.1. Persons with higher education and relevant professional qualification may supervise and review the graduation theses.
- 3.2. The supervisor, the reviewer, and, where necessary, the consultant is approved by the Rector's directive on the proposal of the head of the academic department. The supervisors and consultants are approved after the theses topics committee has accepted the topics of the theses. The reviewers are approved after the preliminary defence.
- 3.3. When approving the supervisor and the consultant, the guiding principle is to ensure that the student is provided with appropriate professional and academic supervision on the selected topic. Generally, a consultant from the Academy is appointed for the thesis if the supervisor is not a member of the Academy's staff. In their activity, the supervisor and the consultant are guided by the publication <u>*Üliõpilaste uurimistööde juhendamine ja tagasisidestamine* (Supervising and Giving Feedback on Students' Research Papers) by Piret Kärtner.</u>
- 3.4. The reviewer analyses the thesis as a whole, following the assessment guide provided by the Office of Academic Affairs. The reviewer submits a signed review of the thesis and the proposed grade to the Office of Academic Affairs not later than three days before the defence and the Office of Academic Affairs forwards the reviewer's comments and questions to the student before the defence.

## 4. Procedure of preparing the graduation thesis

- 4.1. At least by the beginning of each academic year, the Office of Academic Affairs establishes timelines for writing graduation theses, which are coordinated with academic departments. When necessary, the timeline may be changed on the proposal of the academic department. The students are notified of all changes made in the timeline.
- 4.2. For receiving approval for the topic, the student submits a provisional title, the aim and the outline of the thesis to the Office of Academic Affairs.
- 4.3. The topics, supervisors and consultants of graduation theses are approved by the Rector's directive on the proposal of the theses topic committee set up by the Office of Academic Affairs. The committee is composed of at least the head of the R&D Council, heads of study programmes, and, where necessary, heads of training. The committee reviews the materials submitted by the date specified in the timeline, assesses the compliance of the topics with the general objectives of the thesis, and the link between the topic and described objectives of the thesis, the suitability of potential supervisors and other relevant facts.
- 4.4. The student abides by the topic approved by the theses topics committee and the timeline for preparing graduation theses established by the Office of Academic Affairs. If the time limit specified in the timeline is exceeded, the Office of Academic Affairs may refuse to allow the student to the defence. Any change of the topic, supervisor or consultant is approved by a directive approving the reviewers.
- 4.5. The tasks of the supervisor of the graduation thesis are as follows:
- 4.5.1. to advise the student on planning and completing the thesis (from the selection of the topic to defence);

- 4.5.2. to explain the requirements for the thesis set out in these rules and the Academy's guidelines for formatting written assignments;
- 4.5.3. to assess the compliance with the requirements for the graduation thesis, and if the thesis complies with the requirements, to allow the thesis to defence, confirming this by digitally signing the thesis.
- 4.6. While writing the thesis, the student follows the objectives set to the thesis, learning outcomes, and the guidelines for formatting written assignments established at the Academy.

### 5. Preliminary defence

- 5.1. Preliminary defence is a compulsory stage of preparing the thesis in which the preliminary defence committee evaluates the probability of completing the thesis by due date and the compliance of the thesis with requirements and set objectives, and offers individual suggestions and guidance for the successful completion of the thesis. Before allowing the thesis to defence, the preliminary defence committee may impose additional requirements and deadlines on the student.
- 5.2. In exceptional cases, online participation in the preliminary defence may be permitted by the Head of the Office of Academic Affairs if justified reasons have been provided for that in advance.
- 5.3. The dates and times of preliminary defence and members of the preliminary defence committee are approved by the Rector's directive. Proposals on the members of the preliminary defence committee are made by the heads of relevant study programmes.

#### 6. Allowing the thesis to defence and submission of the thesis

- 6.1. The preconditions for allowing the thesis to defence are a positive decision of the preliminary defence committee, completion of the curriculum to the required extent (excl. unfinished practical flight training, also the course on a multi-member cooperation in the Aircraft Piloting curriculum), and a positive decision of the supervisor on the completeness and defensibility of the thesis. Meeting the preconditions for allowing the thesis to defence is verified by the Office of Academic Affairs when scheduling the defence of graduation theses. In exceptional circumstances, the student who has not completed the curriculum to the required extent may be allowed to defend their thesis by the Rector's directive.
- 6.2. The thesis digitally signed by the author and the supervisor is submitted in an electronic format by the date set by the Office of Academic Affairs in the timeline for preparing the theses and in accordance with the guidelines established by the Office of Academic Affairs.
- 6.3. If plagiarism is detected, the Academy's procedure for proceeding with cases of plagiarism is followed, while other cases of academic misconduct are subject to the procedure for handling dishonourable conduct set out in the Academy's Study Regulations.

### 7. Defence of graduation theses

7.1. The dates of defence and the members of the defence committee are approved by the Rector's directive not later than 30 days before the date set the defence. Members of the committee are proposed by the heads of relevant study programmes.

- 7.2. The graduation thesis is defended in the presence of the 5-member defence committee at the announced time and place.
- 7.3. The defence is presided by the chair of the defence committee, who ensures that the timetable is respected.
- 7.4. The chair of the defence committee is assisted by the secretary of the committee, who records the work of the defence committee.
- 7.5. Generally, the reviewer is personally present at the defence. If the reviewer cannot participate the defence for a good reason, the chair of the defence committee takes the place of the reviewer in the academic discussion, observing the review submitted by the reviewer.
- 7.6. The defence committee arranges the defence on the basis of the timeline of the defence procedure (ca 30 minutes for each student), which in general is as follows:
  - the chair gives the floor to the student for presenting a brief overview of the thesis (2 minutes);
  - the student presents a brief overview of the thesis (10 minutes);
  - academic debate between the student and the reviewer (10 minutes);
  - academic debate between the student and the committee (6 minutes);
  - concluding remarks from the student (2 minutes).
- 7.7. After the last student has defended the thesis, a closed meeting of the defence committee is held where the conclusions on the defence are made and the grades of students are discussed and determined as described in section 8 of these rules. At the end of the meeting of the defence committee, all members of the committee sign the report of the work of the defence committee.

#### 8. Assessment of the thesis

8.1. Graduation theses are assessed on the basis of the differentiated grading scale established in the Academy's Study Regulations. In determining grading points and final grades, the following values are assigned to grades:

«A» - 5; «B» - 4; «C» - 3; «D» - 2; «E» - 1; «F» - 0.

8.2. Assessment criteria and their proportion are as follows:

Criterium	Percentage
Based on scientific publications or a real situation, raises a research problem and in line with this, phrases the objective of the thesis, research questions, or hypotheses.	5%
Analyses and synthesises relevant scientific and speciality sources and cites them correctly.	15%
Chooses the most appropriate method for conducting research, explains adequately the choice made, collects and processes research data.	25%
Presents the analysis of research results and conclusions drawn, and	25%

collates them with theoretical premises and/or results of earlier studies.	
Plans and conducts a study, organises the research into a cohesive whole, and in writing the academic text, adheres to the Academy's guidelines for formatting graduation theses and the principles of academic ethics.	20%
Presents the results of research using an appropriate manner of presentation, participates in the academic debate, and defends points of view orally using correct manners of expression.	10%

- 8.3. The thesis is assessed by the reviewer and the defence committee members present at the defence, who follow the assessment scale provided by the Office of Academic Affairs. Any member of the defence committee who is a supervisor, consultant or reviewer of the thesis does not participate in assessing this thesis as a member of the defence committee. In the case of the theses written in pairs, each defender is assessed separately.
- 8.4. The defence committee has a quorum if at least 4/5 of its members are present.
- 8.5. The final result of the thesis is calculated by determining the arithmetic mean of the final grades of the reviewer and defence committee members. The reviewer and each member of the defence committee have one vote of equal weight. The final result is rounded to one decimal point and converted to the final grade of the thesis as follows:
  - A 4.5 to 5.0 B – 3.5 to 4.4
  - C 2.5 to 3.4
  - D 1.5 to 2.4
  - E-1.0 to 1.4
  - F less than 1.0.
- 8.6. For a positive result, all learning outcomes of the thesis must be achieved at the minimum level and the final grade of the thesis must be at least "E".

# 9. Recording and contesting defence results

- 9.1. If a student fails to appear at the defence, "not present" is recorded for the student in the report.
- 9.2. Students who fail to appear at the defence for good reason have the right to defend their thesis at the time determined by the Vice Rector for Education and Research. Good reasons are illness, significant family obligations or other similar events.
- 9.3. If a student decides not to defend the thesis without any good reason after receiving the review, the grade awarded for the thesis is "F", which means "insufficient".
- 9.4. In the case of a negative result, the student is entitled to one repeat defence. For changing the topic of the thesis or supplementing a completed thesis, the consent of the Vice Rector for Education and Research is required.

- 9.5. Repeat defence of undefended theses is only permitted in exceptional cases. For repeated defence, the defence committee requests the student to supplement the completed thesis or choose another topic.
- 9.6. Students who do not agree with the grade awarded at the defence may submit a written appeal to the Vice Rector for Education and Research within three working days after the announcement of the results. For the purpose of considering the appeal, the Vice Rector for Education and Research convenes the defence committee composed of new members and appoints a new reviewer within five working days after receiving the appeal, and arranges a repeat defence. The thesis is defended in front of the new defence committee and assessed by the committee as established in section 8 of these rules within five working days after convening the new defence committee. The grade awarded at the repeat defence is final and is recorded in the study information system.

#### 10. Taking and assessing the final examination

- 10.1. The dates and times of the final examination are announced on the Academy's website at least by the beginning of the semester during which the final examination is taken.
- 10.2. To be allowed to take the final examination, the requirements of the curriculum must be fully completed, which is verified by the Office of Academic Affairs when scheduling the final examination. In exceptional circumstances, the student who has not completed the curriculum to the required extent may be allowed to take the final examination by the Rector's Directive.
- 10.3. The final examination is assessed by the examination board composed of at least three members approved by the Rector's directive. As a rule, the examination board is chaired by the head of study programme. For awarding grades, the examination board has a quorum if more than one half of its members are present. At the end of the meeting of the examination board, its chair signs the report of the work of the examination board.
- 10.4. For a positive result, at least the grade "E" is required; assessment criteria are described in more detail in the syllabus available in the study information system.
- 10.5. During the same semester, only one resit of the final examination is permitted.
- 10.6. Students who do not agree with the grade received at the examination may submit a written appeal to the Vice Rector for Education and Research within three working days after announcing the results. The Vice Rector for Education and Research convenes the examination board composed of new members within five work days after receiving the appeal and the new examination board reviews the compliance of assessment with the instructions to assessment. The new examination board may decide that the grade remains unchanged, is raised or lowered. The decision of the examination board is communicated to the student not later than within five working days after filing the appeal.

# 11. Final provisions

- 11.1. The rules for arranging activities related to graduation theses established by the Council Resolution of 15 February 2023 (Minutes No. 1-4/12) (amendments approved by the Council Resolution of 30 May 2023 (Minutes No. 1-4/38)) are repealed.
- 11.2. These rules enter into force on 5 November 2024.