

SELF-EVALUATION REPORT OF A STUDY PROGRAMME GROUP AT THE LEVEL OF DOCTORAL STUDIES

GUIDE

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A. GENERAL

- **A brief introduction of the university (its self-definition, a brief overview of its history, main aims of its development plan, fields of activity, an overview of its structure, key indicators, etc.)**
NB: See self-evaluation reports on bachelor and master degree programmes — general information about the university does not have to be tied to a specific study programme group or doctoral study.
- **The relative position of the study programme group at the university and in Estonia:** an overview of structural units that actually carry out doctoral programmes within the study programme group, collaboration between these structural units, and relationships/partnerships with other study programme groups/units. The relative position of the doctoral programmes of the study programme group in Estonia: how does the university see its responsibility in relation to this area/study programme group in Estonia as a whole (including adherence to its own strategic trends)? Are there working partnerships with other universities in this study programme group, and how do they work?
- **Aggregate data on study programmes within the study programme group and on doctoral students:**
 - a list of study programmes, responsible structural units, and study programme managers / programme managers;
 - figures related to doctoral students, **presented by study programme as 5-year trends** (preferably in comparison to university averages):
 - ✓ total number of doctoral students, including the number of doctoral students who work in the same university
 - ✓ the number of international doctoral students
 - ✓ admissions, including the number of those who directly enrolled from the 2nd cycle of studies of the same university

- ✓ the number of dropouts, including voluntary withdrawals
 - ✓ the number of doctoral theses defended, including the number of dissertations defended within the standard period + 2
 - ✓ the international mobility of doctoral students
- **A brief description of the most important developments in the doctoral studies within the study programme group between evaluation periods:** an overview of changes during the period between the assessments (launching, closing, or merging study programmes; developing joint study programmes; doctoral schools; etc.) with a brief description of reasons or a reference to the self-evaluation of the specific study programme. Comparison with developments in the same study programme group at other universities, if appropriate.
 - **An overview of regulations of doctoral studies at the university level** (be sure to include links to the relevant regulatory documents in English): rights and responsibilities of doctoral students and their supervisors, procedures for the evaluation of doctoral students, requirements for doctoral theses and their defence, etc.

NB: If the regulations are available in English, there is no need to provide abstracts of them here. They should be referred to in self-evaluations of study programmes and evidence of compliance provided.

- **The effectiveness and aggregate results of the feedback systems for doctoral students, alumni and employers, by study programme; the effectiveness and results of feedback from the academic staff.** Describe how feedback is collected from different target groups; who analyses the results of feedback and how; how changes are planned; and how those who provided feedback are informed about such changes. Comparisons of study programmes must include the results of feedback from doctoral students and alumni (on the organisation of doctoral studies, and the quality of instruction and supervision).
- Other information about assessment areas considered relevant by the university, relating to all study programmes within the study programme group.

B. SELF-EVALUATION(S) OF STUDY PROGRAMME(S) BY ASSESSMENT AREA

Self-evaluation must follow the structure of assessment areas. At the beginning of each assessment area, this guide lists the relevant standards established by the regulation, ‘Quality Assessment of Study Programme Groups at the Level of Doctoral Studies’. All questions presented below the standards relating to each assessment area must be answered in the report, but the place of an answer may vary (e.g. some questions that are outlined under Doctoral Students may be answered under Study Programme). It is important to follow the logic of each specific self-evaluation of a study programme and avoid excessive repetition. If any aspect extends to all study programmes, it will be appropriate to indicate it separately under General and not to mention it again under Study Programme.

Under each assessment area, it is important to provide indicators against which compliance with the requirements and/or the degree of achievement of objectives can be assessed.

At the end of each assessment area, please summarise the main strengths and areas for improvement, and also mention the improvement activities already planned.

B1 Study Programme X

Title of the study programme	<i>Physics</i>
Academic unit responsible for conducting the study programme	<i>faculty, institute, department, chair; in the case of departments/chairs, please specify the faculty/institute at which they operate, if appropriate</i>

Principal compiler of self-evaluation of the study programme, Study Programme Manager / Programme Manager	<i>name, position, contact details</i>
Brief description of the process of self-evaluation of the study programme	<i>time frame, participants, distribution of work, coordination, etc.</i>

1. Study programme

1. The launch and development of the study programme are based on the Standard of Higher Education and other legislation, national strategies, university development plans, the effectiveness of research and development, various analyses (including labour market and feasibility analyses); striving for the best overall programme quality.
2. Doctoral programmes contain at least 70% research, development or other creative work by doctoral students, making the results thereof public in international peer-reviewed research journals or in other ways that have international dimensions.
3. Study programmes incorporate doctoral student participation in conferences and/or other professional activities, and are counted towards completion of the study programme.
4. Doctoral programmes enable doctoral students to acquire leadership and teamwork skills, develop coaching and teaching skills as well as a proficiency in foreign languages at the level needed for successful participation in international working environments.
5. Different components of a doctoral programme form a coherent whole supporting the personal development of each doctoral student.
6. Study programme development takes into account feedback from doctoral students, supervisors, employers, alumni and other stakeholders.

- What are the requirements and/or objectives for the quality of the doctoral programme as set by the university or its structural unit? How have these requirements/objectives been met? What indicators do you use to assess the fulfilment or degree of achievement of these objectives?
- Please describe the process of study programme development (launching, changing, internal evaluation). Who are involved in it, what is taken into account (the needs of society, strategies, comparison with similar study programmes at international universities, etc.)?
- To what extent has the need to support individual professional needs of each doctoral student during his or her studies been taken into account while compiling the study programme? Give examples of the flexibility of the study programme based on the individual needs of doctoral students.
- What are the scope and objectives of doctoral student participation in conferences, doctoral courses at foreign universities and/or other professional activities included in the study programme?
- How does the study programme support development of the general competencies of doctoral students, including management and teamwork skills, supervising and teaching skills, and proficiency in a professional foreign language? Are the results satisfactory? What could be done better/differently?
- How is coherence of the study programme ensured? How is it ensured that the teaching staff (including supervisors) are aware of the content and outputs of their colleagues' work within the same study programme?
- Please evaluate doctoral students' feedback on the subjects, obtained over the past three academic years (for example: What received the most positive feedback from doctoral students? What were the doctoral students most critical of? What could cause such criticism?) Please indicate specific activities of study programme development which you have started or which have already been implemented based on doctoral students' feedback.

- Please point out the ideas you have got based on feedback from alumni. Do you receive feedback from employers, and how? What have you changed based on such feedback?

Strengths, areas for improvement, and planned improvement activities relating to the study programme.

2. Resources

1. In conducting doctoral study programmes, an adequate number of teaching staff and researchers participate, who hold the appropriate qualifications required to carry out doctoral studies and supervise doctoral theses in a given study programme.
2. Universities shall ensure that sufficient funds are available to conduct doctoral studies, to provide development activities associated with doctoral studies and research, and to support the professional development of teaching staff and researchers.
3. Resources (teaching, learning and research environments; libraries; resources required for teaching, learning and research) support the achievement of objectives set out in study programmes as well as the actual teaching, learning and research at the level of doctoral studies. Resource development is sustainable.
4. Trends in the numbers of current learners, admitted learners and graduates (by study programme) in doctoral studies under the study programme group during the last five years indicate sustainability.

/Experts receive aggregate information about the infrastructure from the materials submitted for ordinary evaluations, but here we expect to see analyses of its adequacy and sustainability/

- What are the requirements or objectives for resources needed for the implementation of doctoral studies, as set by the university? How have these requirements/objectives been achieved within the given study programme? What indicators do you use to assess the fulfilment of these requirements/objectives?
- Evaluate the supply of learning and research materials and equipment (including expendable materials, etc.), the condition of research laboratories and classrooms, adequacy of financial resources to implement doctoral studies and to achieve its objectives. What development needs do you envision for the short term and long term?
- Please evaluate doctoral students' feedback on the adequacy of resources. Have you reacted to such feedback, and how?
- What is the feedback from teaching staff and supervisors regarding the adequacy and availability of resources? Have you reacted to such feedback, and how?
- Doctoral student stipends and the involvement of doctoral students in research projects — available funds, including for international mobility?
- What are the resource-related trends and future risks (obsolescence of equipment, decrease in the number of doctoral students, etc.); how are these trends taken into account; and how are the risks mitigated? How is it determined that resources are in accord with actual (changing) needs and contemporary requirements? How is such accord ensured? How is the effectiveness of using resources ensured?

Strengths, areas for improvement, and planned improvement activities relating to resources.

3. Teaching, learning, research and/or creative activity

1. Uniform principles, based on best international practices and agreed upon at the university level, shall be followed while implementing doctoral programmes and assuring the quality of the doctoral studies (including supervision of doctoral theses).
2. Doctoral studies support students' personal and social development, including creating an environment which will prepare them to successfully participate in international working environments at research and development institutions, as well as in the business and public sectors.

3. Supervision of doctoral theses; modern methodology used in teaching and research; organisation of studies; and doctoral students' professional research, development and/or other creative activities all support achievement of the objectives and learning outcomes of doctoral studies.
4. Assessment of outcomes of the learning, research and creative work done by doctoral students is relevant, transparent and objective, and supports the development of doctoral students.
5. Doctoral students are asked for feedback regarding supervision on a regular basis and the results of these surveys are taken into account for quality improvement activities.
6. Effectiveness of the doctoral studies is analysed and such analyses serve as a basis for planning quality improvement activities.

- What are the objectives for the quality of implementation and supervision of doctoral studies, as set by the university? How have these objectives and agreements been fulfilled within the given study programme? What indicators do you use to assess the fulfilment of these requirements/objectives?
- How is it ensured that the actual doctoral student workloads for learning and research are in accordance with credit points determined by the study programme? Is this analysed, and how?
- When implementing doctoral studies, how are doctoral students' individual professional needs as well as the needs arising from topics of their theses taken into consideration? Give examples of good practice.
- How is it ensured that innovative methods are used which support learning and research? Please give examples of the use of teaching and supervising methods that support independent study, research and self-evaluation by doctoral students.
- How do you monitor that the teaching staff's choices of teaching and assessment methods as well as their supervision of doctoral theses are based on the objectives and planned learning outcomes of subjects in the doctoral programme? Do the doctoral students, teaching staff and supervisors provide feedback to each other? Give examples of good practice.
- What are the main concerns related to supervision of doctoral theses and how are they resolved?
- How do the doctoral students get feedback on their progress during their studies (from whom, at what intervals)? How is the objectivity and relevance of doctoral student assessment ensured (assessment of the degree of achievement of planned learning outcomes)?
- What is done to reduce/prevent academic fraud? How does the university address fraud cases?
- How is the teaching practice of doctoral students at the university organised? What role does teaching have in achieving objectives of doctoral studies? What is the student feedback on teaching conducted by doctoral students, how is such feedback analysed and what follows the analysis?
- How is it assessed whether doctoral students have achieved the expected learning outcomes of the study programme, including management and teamwork skills, supervising and teaching skills, as well as sufficient proficiency in a foreign language that allows them to work in international working environments?
- How is the procedure for recognition of prior learning and work experience ensured in doctoral studies? Describe any problems and their solutions.
- Please evaluate doctoral student feedback on the supervision obtained over the past three academic years. How have you analysed the results of such feedback and addressed them? Please point out trends, and evaluate the impact of such feedback.

Strengths, areas for improvement, and planned improvement activities relating to teaching, learning, research and/or creative activity.

4. Teaching staff

1. Teaching staff participate in research, development and/or creative activity at the level of and to the extent sufficient to conduct doctoral studies in the curriculum group and to supervise doctoral theses.
2. Teaching staff develop their supervisory competences and share best practices with one other.
3. Teaching staff collaborate in fields of teaching, research and creative work within the university and also with stakeholders outside the university (public sector organisations, enterprises, other research and development institutions).
4. Teaching staff further their skills at foreign universities or other research institutions, participate in international research and creative projects, and present papers at high-level conferences.
5. Qualified international and visiting teaching staff are involved in conducting doctoral studies, participating in doctoral thesis defence panels and/or reviewing doctoral theses.
6. When assessing the work of teaching staff (including their evaluations), the effectiveness of their teaching as well as of their research, development and creative works is taken into account; including the effectiveness of their student supervision, development of their teaching and supervisory skills, and their international mobility.

- What quality objectives have been set by the university or its academic unit for supervisors of doctoral theses and teaching staff who are involved in doctoral studies, regarding their research, their teaching and supervising skills, and the effectiveness of their supervision of doctoral theses. How have these objectives been achieved within the given study programme? What indicators do you use to assess the degree of fulfilment/achievement of these objectives?
- When appointing thesis supervisors, to what extent is it taken into account, that they have published materials at international level relevant to the field of the topics of doctoral theses being supervised? Please analyse, in the given study programme, the correspondence between interconnectedness of research done by thesis supervisors with the topics of doctoral theses of supervisees and subsequent successful defences of doctoral theses.
- How many doctoral students are involved in their supervisors' research projects? Is the work by doctoral students in such research projects related to their doctoral theses?
- How are (novice) supervisors supported with regard to the development of their supervising skills? Whose task is it to advise members of the teaching staff on the objectives and planned learning outcomes of doctoral programmes and of the contributions by their colleagues to achieve them?
- How is it monitored that the teaching staff base their choice of teaching and assessment methods on objectives and planned learning outcomes of the study programme and subjects? Do the teaching staff provide feedback on the design and implementation of educational activities and how is it done? Give examples of good practice.
- Who gives feedback to members of the teaching staff and thesis supervisors regarding the effectiveness of their work in teaching and supervising, and how? What follows the feedback? Please give examples of supervising-skills development of the supervisors. Do the supervisors apply their new skills, and how?
- How does the supervising effectiveness of teaching staff affect their remuneration, evaluation and/or (re)selection?
- Is there any cooperation with (international) partners regarding implementation of the study programme (e.g. doctoral schools, joint modules with [foreign] universities, summer and winter schools), and with whom? To what extent, and how, did teaching staff of other

Estonian or foreign universities participate in conducting educational activities over the past three academic years (e.g. in teaching, in defence committees as opponents)?

- Have the results of feedback from doctoral students been taken into account during development interviews with the teaching staff and thesis supervisors, when evaluating or reselecting them, when assigning supervisees to them, or planning their in-service trainings, and how?

Strengths, areas for improvement, and planned improvement activities relating to the teaching staff.

5. Doctoral students

1. When admitting students to doctoral study, their suitability for successful completion of their studies is assessed on the basis of transparent criteria.
2. Doctoral students plan their studies as well as research and development activities in collaboration with their supervisor(s), setting out specific objectives for each year and taking responsibility for achieving these objectives.
3. Evaluation of doctoral students is transparent and impartial. Its purpose is to support development of the doctoral students, provide an opinion regarding the effectiveness of their work to date, and assess their capabilities to complete their studies on time and successfully defend their doctoral theses.
4. Universities offer doctoral students counselling on completing their studies and planning their further careers.
5. Doctoral students' extracurricular teaching, research and/or creative activities or other work-related activities at the university support successful completion of their doctoral studies.
6. Doctoral students participate in international mobility programmes or take advantage of other opportunities for learning or research at foreign universities and/or research and development institutions¹.
7. Alumni are regularly asked for feedback on the quality of the doctoral study, and employers are asked for feedback on the preparation of the graduates.

- What are the objectives for the students' academic progress, counselling, mobility, etc., as set by the university or its structural unit? How have these objectives been achieved within the given study programme? What indicators do you use to assess the fulfilment/achievement of these objectives?
- What are the admission requirements for the study programme? How do you evaluate students' prior preparation/education (including the level of international students, for example)? What are the capabilities of the university to assess applicants' motivation to learn as well as the adequacy of their preparation during the admission process?
- How are the studies and research for doctoral students planned? To what extent are doctoral students able to design the content of and time management for their studies and research, and how does the university support autonomous learners?
- What is the aim of the evaluation of doctoral students and who are in the evaluation committees? How do doctoral students and their supervisors assess the impact of the evaluation? Have any changes been introduced in the principles or procedures for evaluation based on doctoral students' feedback, and if so, what changes?
- What are the reasons for dropping out (voluntary withdrawal)? What has been done to reduce the number of voluntary dropouts? What has been done to reduce the number of other dropouts (deleted from the matriculation register on the initiative of the university)?
- What kind of support does the university offer to doctoral students during their studies and for their future career planning?

¹ In the context of this document, 'research and development institutions' denote both research institutions and research-intensive companies.

- Evaluate the national and international mobility rates of doctoral students to date.
- How do you evaluate the success of your alumni in the labour market? Do you obtain feedback from graduates of the study programme on their employment, and how; do you use it, and how? What are the conclusions?

Strengths, areas for improvement, and planned improvement activities relating to doctoral students.

Aggregate Analysis of the Study Programme

more important strengths and areas for improvement based on the previous analysis of the study programme

Action Plan for the Study Programme

is based on the results of self-evaluation of the study programme

Action(s)	Person(s) responsible	Term	Expected result(s)
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B2. Study Programme Y

- 1. Study programme*
- 2. Resources*
- 3. Teaching, learning, research and/or creative activity*
- 4. Teaching staff*
- 5. Doctoral students*

Aggregate Analysis of the Study Programme

Action Plan for the Study Programme

C. AGGREGATE ANALYSIS OF THE STUDY PROGRAMME GROUP

A summary of the most important strengths and areas for improvement indicated in the self-evaluations of the study programmes within the study programme group, their analyses and action plans. Here we also recommend making a proposal in writing to the assessment committee for emphasis.

Based on the self-evaluation, what are the overall strengths of the study programme group, and what are the advantages they present to the university for enhancing the quality of teaching and learning? Please indicate the key challenges and the prospects for eliminating them. How is implementation of the action plans, prepared on the basis of the self-evaluations of study programmes, monitored at the level of the study programme group, academic unit or university?

D. APPENDICES TO THE SELF-EVALUATION REPORT

- A list of study programmes under evaluation, including their objectives and planned learning outcomes at both the study programme and module levels;
- information about members of the teaching staff for all the subjects of each study programme, drawn up in tabular form: name, year of birth, position, workload at the university, qualifications, subject taught and its workload, a link to his or her CV in English in the Estonian Research Information System ETIS (hereinafter referred to as ETIS) or elsewhere;
- topics of doctoral theses and names of thesis supervisors, drawn up in tabular form: names of doctoral students linked to their CVs in ETIS in English, study programme, year of enrolment, topics of their doctoral theses, names of supervisors linked to their CVs in English in ETIS or elsewhere);
- a list of dissertations defended over the last five years, drawn up in tabular form (names of doctoral students linked to their CVs in ETIS in English, study programme, years of enrolment and of defence, topics of their doctoral theses, names of supervisors linked to their CVs in ETIS in English, composition of defence committees, names and workplaces of opponents/reviewers);
- a selection of extracts from the minutes of evaluation committees for the last three years (3–5 evaluation examples per study programme).