



**Report
of the Expert Panel
on the RE-ACCREDITATION
of the University Postgraduate (Doctoral) Programme
Electrical Engineering and Computing**

**Date of the visit to the Faculty of Electrical Engineering and Computing
University of Zagreb:
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INTRODUCTION

The Expert Panel appointed by the Agency for Science and Higher Education (ASHE) created this Report on the Re-accreditation of the University Postgraduate (Doctoral) Programme *Electrical Engineering and Computing* on the basis of the Self-Evaluation Report of the Programme, other documentation submitted and a visit to the Faculty of Electrical Engineering and Computing, University of Zagreb which delivers the Programme.

The Agency for Science and Higher Education (ASHE), a public body listed in EQAR (European Quality Assurance Register for Higher Education) and a full member of ENQA (European Association for Quality Assurance in Higher Education), re-accredits higher education institutions (hereinafter: HEIs) and their study programmes in line with the Act on Quality Assurance in Science and Higher Education (Official Gazette 45/09) and the Ordinance on the Content of a Licence and Conditions for Issuing a Licence for Performing Higher Education Activity, Carrying out a Study Programme and Re-Accreditation of Higher Education Institutions (OG 24/10). In this procedure parts of activities of higher education institutions and university postgraduate study programmes are re-accredited.

Expert Panel is appointed by the Agency's Accreditation Council, an independent expert body, to carry out independent evaluation of post-graduate university study programme *Electrical Engineering and Computing*.

The Report contains the following elements:

- Short description of the study programme
- The recommendation of the Expert Panel to the Agency's Accreditation Council
- Recommendations for institutional improvement and measures to be implemented in the following period (and checked within a follow-up procedure)
- A brief analysis of the institutional advantages and disadvantages
- A list of good practices found at the institution
- Conclusions on compliance with the prescribed conditions of delivery of a study programme
- Conclusions on compliance with the criteria for quality assessment.

Members of the Expert Panel:

- Dr. Gordon Dalton, University College Cork, Ireland, President of the Expert Panel
- Prof. Daniele Nardi, Sapienza University of Rome, Italy
- Prof. Karol Kalna, College of Engineering, Swansea University, UK
- Prof. Jens Grabowski, Georg-August-Universität Göttingen, Germany
- Prof. Aurélio Campilho, Faculdade de Engenharia da Universidade do Porto, Portugal
- Prof. Aurelian Francillon, EURECOM - Graduate School and Research Center in Communication System, France
- Prof. Zoltán Fülöp, University of Szeged, Hungary
- Prof. Ove T. Gudmestad, University of Stavanger, Norway
- Prof. Hongming Xu, Department of Mechanical Engineering, University of Birmingham, UK

- Prof. Vadim Silberschmidt, Wolfson School of Mechanical, Electrical and Manufacturing Engineering, Loughborough University, UK
- Prof. Sergey V. Utyuzhnikov, School of Mechanical, Aerospace and Civil Engineering, University of Manchester, UK
- Stjepan Sučić, employer representative, Končar - inženjering za energetiku i transport, d.d., Croatia
- Prof. Kjell Ivar Øvergård, Faculty of Technology and Maritime Science, University College of Southeast Norway, Norway
- Prof. Aleksander Sladkowski, Silesian University of Technology, Poland
- Prof. Stojan Petelin, univ. dipl. inž. stroj., Fakulteta za pomorstvo in promet, Univerza v Ljubljani, Slovenija
- Giuseppe Moschetti, doctoral candidate, Huddersfield University, UK
- Maximilian Lesellier, doctoral candidate, Robotique et de Microélectronique de Montpellier (LIRMM), France
- Ana Carolina dos Santos Paulino, doctoral candidate, University of Strasbourg, France
- Massimiliano Ferrucci, doctoral candidate, National Physical Laboratory, KU Leuven, Belgium
- Hilde Sandhåland, doctoral candidate, Department of Maritime Studies, Stord/Haugesund University College, Norway.

The higher education institution was visited by the following Expert Panel members:

- Dr. Gordon Dalton, University College Cork, Ireland,
- Prof. Daniele Nardi, Sapienza University of Rome, Italy
- Prof. Karol Kalna, College of Engineering, Swansea University, UK
- Prof. Jens Grabowski, Georg-August-Universität Göttingen, Germany
- Prof. Aurelian Francillon, EURECOM - Graduate School and Research Center in Communication System, France
- Prof. Zoltán Fülöp, University of Szeged, Hungary
- Massimiliano Ferrucci, doctoral candidate, National Physical Laboratory, KU Leuven, Belgium.

In the analysis of the documentation, site visit and writing of the report the Panel was supported by:

- dr. sc. Josip Hrgović, coordinator, ASHE
- dr. sc. Marina Matešić, assistant coordinator, ASHE
- Lida Lamza, interpreter at the site visit and translator of the Report, ASHE.

During the visit to the Institution the Expert Panel held meetings with the representatives of the following groups:

- Management
- Study programme coordinators
- Doctoral candidates
- Teachers and supervisors

- External stakeholders
- Alumni.

The Expert Panel also had a tour of the library, IT rooms, student register desk and the classrooms.

SHORT DESCRIPTION OF THE STUDY PROGRAMME

Name of the study programme contained in the licence: Electrical Engineering and Computing

Institution providing the programme: University of Zagreb

Education provider: Faculty of Electrical Engineering and Computing

Place of delivery: Zagreb

Scientific area and field: Engineering (Technical) Sciences, fields Electrical Engineering and Computing

Learning outcomes of the study programme: /

Number of doctoral candidates: 196 (enrolled in the academic year 2015/16)

Number of teachers: 206 (according to the approved study programme)

Number of supervisors/advisors: 85 (with formal appointment by the Senate)

RECOMMENDATION BY THE EXPERT PANEL TO THE ASHE'S ACCREDITATION COUNCIL

Upon the completion of the re-accreditation procedure and the examination of the materials submitted (Self-Evaluation Report etc.), the visit to the higher education institution and interviews with HEI members in accordance with the visit protocol, the Expert Panel renders its opinion in which it recommends to the Accreditation Council of the Agency the following:

renew the licence and label it as 'high quality'.

RECOMMENDATIONS FOR THE IMPROVEMENT OF THE STUDY PROGRAMME

1. The HEI should reduce the number of ECTS credits acquired by passing courses, from current 30, to align with other European programmes. This will allow more time to conduct research.
2. The HEI should reduce duration of the postgraduate study by encouraging thesis topic submission within first year, the earlier start of research and the completion of thesis.
3. FER should reduce the teaching load for faculty-funded candidates as well as for supervisors. This will facilitate more research to be conducted by both parties.
4. FER is one of the well-funded faculties in Croatia, which is commendable. It is recommended for the Faculty to consider providing a number of faculty-funded stipends to further increase the number of fully-funded student candidates.
5. FER should maintain better records of student drop-out rates.
6. FER should encourage the use of English in the programme, particularly in the course work and in the written theses. This will ensure that the programme reaches a wider international audience.
7. FER could stimulate the involvement of industry by creating, for example, industrial advisory boards. Additionally, it would be helpful to enable students to partake in Doctoral Studies Committee.
8. FER should ensure that student employment contracts specifically outline the student's rights and responsibilities by, for example, including the number of required teaching hours as well as the number of hours that should be reserved for performing doctoral research. This suggestion is particularly relevant for industry-funded candidates, whose responsibilities in industry may make it more difficult to complete their PhD studies on time. Discussions with industry on including such stipulations on a minimum number of hours dedicated to PhD research could be helpful in this regard.

ADVANTAGES OF THE STUDY PROGRAMME

1. Faculty is well funded, has a strong international programme, and a high number of H2020 projects.
2. Faculty is well connected with industry, with good research labs and facilities.

3. Industry provides funding for large number students.
4. The research topics of postgraduate students are aligned with international trends.
5. Well publicised and organised recruitment for the postgraduate study.

DISADVANTAGES OF THE STUDY PROGRAMME

1. English is not prevalent in taught courses or encouraged in the thesis submission. This has the impact of reducing the programme's international attractiveness and outreach potential.
2. Despite industry support and funding, a large percentage of industry-funded students drop out and fail to complete. Ensuring a 3-year-guaranteed funding can help improve completion rates.
3. There is still a relatively large number of self-funded candidates. FER should consider offering faculty funded stipends.
4. Some supervisors have a high teaching load, possibly reducing their research performance.
5. Tuition fees are not equal among types of students: faculty, industry and self-funded.

EXAMPLES OF GOOD PRACTICE

1. Well-structured program, with a good degree of flexibility.
2. Credits are provided for a student's previous publications.
3. Industry candidates are given certain exemptions allowing them to complete research work.
4. Anonymous surveys are provided to receive feedback from postgraduate students.
5. Well established process to monitor a postgraduate student progress.

COMPLIANCE WITH THE PRESCRIBED CONDITIONS FOR THE DELIVERY OF A STUDY PROGRAMME

Minimal legal conditions:	
1. Higher education institution (HEI) is listed in the Register of Scientific Organisations in the scientific area of the programme, and has a positive reaccreditation decision on performing higher education activities and scientific activity.	YES
2. HEI delivers programmes in the two cycles leading to the doctoral programme, i.e., first two cycles in the same area and field/fields (for interdisciplinary programmes), and employs a sufficient number of teachers as defined by Article 6 of the Ordinance on the Content of a Licence and Conditions for Issuing a Licence for Performing Higher Education Activity, Carrying out a Study Programme and Re-Accreditation of Higher Education Institutions (OG 24/10).	YES
3. HEI employs a sufficient number of researchers, as defined by Article 7 of the Ordinance on Conditions for Issuing Licence for Scientific Activity, Conditions for Re-Accreditation of Scientific Organisations and Content of Licence (OG 83/2010).	YES
4. At least 50% of teaching as expressed in norm-hours is delivered by teachers employed at the HEI (full-time, elected into scientific-teaching titles).	YES
5. Student: teacher ratio at the HEI is below 30:1.	YES
6. HEI ensures that doctoral theses are public.	YES
7. HEI launches the procedure of revoking the academic title if it is determined that it has been attained contrary to the conditions stipulated for its attainment, by severe violation of the studying rules or based on a doctoral thesis (dissertation) that has proved to be a plagiarism or a forgery according to provisions of the statute or other enactments.	YES
Additional/ recommended conditions of the ASHE Accreditation Council for passing a positive opinion	
1. HEI (or HEIs in joint programmes) has at least five teachers appointed to scientific-teaching titles in the field, or fields relevant for the programme involved in its delivery.	YES
2. In the most recent reaccreditation, HEI had the standard Scientific and Professional Activity (e.g. Artistic for those in the arts field) marked as at least "partly implemented" (3).	YES
3. The doctoral programme is aligned with the HEI's research strategy.	YES
4. The candidate : supervisor ratio at the HEI is not above 3:1.	YES
5. All supervisors meet the following conditions: a) PhD, elected into a scientific title, holds a scientific or a scientific-teaching position and/or has at least two years of postdoctoral research experience; b) active researcher in the scientific area of the programme, as evidenced by publications, participation in scientific conferences and/or projects in the past five years (table 2, Supervisors and candidates); c) confirms feasibility of the draft research plan upon admission of the candidate (or submission of the proposal); d) ensures the conditions (and funding) necessary to implement the candidate's research (in line with the draft research plan) as a research project leader, co-leader, participant,	YES

collaborator or in other ways; e) trained for the role before assuming it (through workshops, co-supervisions etc.); f) received a positive opinion of the HEI on previous supervisory work.	
6. All teachers meet the following conditions: a) holds a scientific or a scientific-teaching position; b) active researcher, recognized in the field relevant for the course (table 1, Teachers).	YES
7. The supervisor normally does not participate in the assessment committees.	YES
8. The programme ensures that all candidates spend at least three years doing independent research (while studying, individually, within or outside courses), which includes writing the thesis, publishing, participating in international conferences, field work, attending courses relevant for research etc.	YES
9. For joint programmes and doctoral schools (at the university level): cooperation between HEIs is based on adequate contracts; joint programmes are internationally recognized, and delivered in cooperation with accredited HEIs; the HEI delivers the programme within a doctoral school in line with the regulations (it is based on contracts in the case of multiple institutions, and the HEIs ensure good reaccreditation aimed at supporting the candidates); at least 80% of courses are delivered by teachers employed at HEIs within the consortium.	N/A

QUALITY ASSESSMENT

	Quality assessment: “high level of quality” or “improvements are necessary”
1. RESOURCES: TEACHERS, SUPERVISORS, RESEARCH CAPACITIES AND INFRASTRUCTURE	
1.1. HEI is distinguished by its scientific/artistic achievements in the discipline in which the doctoral study programme is delivered.	<p>High level of quality</p> <p>FER has a long history and a very rich research record. This is clearly demonstrated by both the number of publications and the number of research projects that have been and are being acquired by its researchers. The publication records show a high level research activity. Besides, FER is very successful in receiving funds for research: currently they have 110 running projects in research and technology development. They enjoy considerable support from the EU programmes FP7 (it was 16 million Euros from 2009 to 2014), Horizon 2020, COST and others, and also from the Croatian Science Foundation (33 projects funded). Their scientific activity is also demonstrated by the organization of several scientific programmes (among others, 23 conferences and workshops in the last two years). They also promote their scientific and professional fields in several ways. It is considerable that FER is a representative member of the “Centre of Research Excellence for Data Science and Cooperative Systems”, which was established in 2015 and comprises 80 researchers of 13 institutions.</p>
1.2. The number and workload of teachers involved in the study programme ensure quality doctoral education.	<p>High level of quality</p> <p>The study programme is offered with the support of 206 teachers, three quarter of them being FER members. Data about the teachers are reported in the Table 1 in the Appendix. The data cover the most of the teachers (183), nonetheless, it is advisable to avoid this kind of incompleteness in the report.</p> <p>The average teaching is shown to be in line with current national regulations, and therefore it satisfies the quantitative requirement. However, the distribution of the workload shows a significant variance with substantial extra load on some teacher (up to the double of the average) and some significantly lower load for a non-negligible number of teachers. Although some teacher’s situations with a low teaching load may have good justifications, the excess of teaching load may have a negative impact on teachers, as it may reduce their</p>

	<p>potential as advisors. Remark: Some entries show a teaching load 0, and it is unclear why they are included as teachers. In general, some analysis of the relationship between the teaching load and the activity as supervisor may provide useful insights.</p>
<p>1.3. The teachers are highly qualified researchers who actively engage with the topics they teach, providing a quality doctoral programme.</p>	<p>High level of quality Data about the scientific qualification of teachers is also reported in Table 1. Overall, the FER has a high number of scientific publications relevant to the field of the doctoral programme. However, as for the teaching load, this table show a significant variance around the average values, which satisfy the overall basic requirement. The average number of publications per teacher is 28.75 in the last 5 years (5.75 per year) and the corresponding average number of citations is 72.86. The average of the H-index of the teachers is 7.75. Remark: Also in this case, some data analysis could be useful to uncover whether excessive teaching load may impact on the scientific productivity.</p>
<p>1.4. The number of supervisors and their qualifications provide for quality in producing the doctoral thesis.</p>	<p>High level of quality In general, the set of supervisors (which is about two-thirds of the teachers) is qualified and satisfies the requirements for a successful PhD programme. Ensemble of supervisors at FER can be specified in detail as: - the doctoral candidate to supervisor ratio is shown to be 2.92:1 which is a lower than the prescribed 3:1. - all the supervisors satisfy the internal (Zagreb University) requirements for acting in such capacity. In addition, there are teachers which satisfy the requirements to be supervisors, but did not have PhD students in the reported period (which has been adequately explained); - the supervisors' profile in terms of number of publications, and in terms of research projects, are, in the average, satisfactory, but Table 2 shows a significant variance (with respect to both the publication and the project figures), whose analysis seems worth investigating; - most of the supervisors are leaders, or members, of national or international research projects (the average number is 1.768 international project per supervisor and 1.832 national project per supervisor). - Table 2 also reports the number of publications co-authored with a PhD candidate to show the collaboration between supervisor and candidate student. While the data indicate a correlation, the number of joint publications is</p>

	<p>lower than expected. This is justified in the report, by noticing that most of the publications come in the last part or after the completion of the PhD. However, this aspect could be further investigated.</p> <p>Remark: The data about the completion rate refer to the number of students which had their thesis topic approved by the Senate. In this group, the drop-out rate is around 10% of the candidates that were awarded the PhD. This can be considered a natural phenomenon considering that half of the candidates are still in the process. However, it should be noted that there is not a quantified number of candidates who are enrolled in the programme and drops out before the approval of the research topic.</p> <p>The Panel recommends to include these dropped out students into statistics because otherwise the statistics is obscured.</p>
<p>1.5.The HEI has developed methods of assessing the qualifications and competencies of teachers and supervisors.</p>	<p>High level of quality</p> <p>General regulations are determined to ensure the quality of study programmes and the scientific work both at University level and at the level of FER (the latter is the Regulations on quality assurance system of FER). At FER, the Faculty Council is responsible for implementing these regulations. Besides, there are specific regulations concerning the quality assurance for the doctoral study programmes at both levels (described in the corresponding Regulations on doctoral studies). In addition, in every 5 years, the University of Zagreb carries out an internal evaluation of the PhD programmes which includes the evaluation of the teachers and the supervisors.</p> <p>At the FER, the assessment and monitoring of teachers is performed yearly when the didactic offer is defined, based on the proposals by the teachers. The teachers must be active in research work (the quality is measured in the number of publications in the last 5 years) and in project work (measured in the number of research projects they lead or participate in). This assessment could also be accompanied by standard evaluation procedures that ensure the quality of teaching (e.g. student satisfaction questionnaires). Supervisors must fulfil even additional requirements.</p> <p>Overall, it can be concluded that assessing the qualifications and competencies of teachers and supervisors is assured at FER.</p>
<p>1.6.The HEI has access to high-quality resources for research, as required by</p>	<p>High level of quality</p> <p>Overall, the hardware equipment is suitable to support</p>

<p>the programme discipline.</p>	<p>experimental activities that are foreseeable in the PhD programme considered. Specifically, the Self-Evaluation provides a list of 29 Research Laboratories that cover a variety of subjects and therefore provide opportunities to carry out research in a number of research areas. The search on the web on the activities carried out in those labs shows a number of cases where information is provided according to the common international practices (thus being attractive for prospective students). There are however several cases where no information about the lab is available in the internet (causing a lack of visibility for the activity carried out therein). One difficult-to-find figure, which would be useful in the assessment of the PhD programme, is the number of PhD students that are affiliated with each laboratory.</p> <p>Computing equipment and network access are provided according to the standards of international research institutions. Moreover, the library provides an excellent service both in terms of available hard copy collection of scientific resources (books, journals, reports, etc.) and in terms of access to digital resources as, for example, IEEE Digital Library. It can be concluded that FER has access to high-quality resources for research. However, we would like to add that Panel members were not able to log into the digital library during their visit so we would like to ask the Dean to keep eye on this technical issue.</p> <p>Remark: Unfortunately, access to some resources is not provided at the national level. FER provides access to the IEEE/IET Electronic Library for its faculty, but it is still missing access to important archives (such as the ACM digital library).</p> <p>We recommend that access to major bibliographic resources is made available to the students.</p>
<p>2. INTERNAL QUALITY ASSURANCE OF THE PROGRAMME</p>	
<p>2.1. The HEI has established and accepted effective procedures for proposing, approving and delivering doctoral education. The procedures include identification of scientific/ artistic, cultural, social and economic needs.</p>	<p>High level of quality</p> <p>The establishment of doctoral programmes is regulated by university-wide regulations. The proposal of a new doctoral programme requires the description of scientific, cultural, social and economic needs. The final foundation of a doctoral programme requires the decision of the Senate of the University of Zagreb.</p> <p>The doctoral programme at FER has been proposed, approved and finally established according to these regulations. Scientific, cultural, social and economic needs</p>

	are well considered.
<p>2.2. The programme is aligned with the HEI research mission and vision, i.e. research strategy.</p>	<p>Improvements are necessary</p> <p>The doctoral programme of FER is well aligned with the Strategy of the research, technology transfer and innovation of the University of Zagreb and the Development Strategy of FER. Research and innovation activities cover most important topics in the areas of electrical engineering, computing and information technology.</p> <p>The research foundations of the doctoral programme are best documented with the success in acquiring national and international research projects with funding. FER is very successful in the acquisition of European projects (FP7 and Horizon 2020 programmes). In April 2016 more than 100 young FER researchers (out of approx. 500 employees) were funded by European projects. The research carried out within the framework of the doctoral programme is directly linked to research projects by which these scientists are employed.</p> <p>The FER doctoral programme is research oriented. This means the obligatory coursework (20%) is the minimal load allowed by the regulations of the University of Zagreb for doctoral programmes. This load is still higher than in most European countries.</p> <p>Whereas the doctoral students employed by the Faculty or funded by research projects profit from the high involvement in national and international research projects, self-funded and industrial-funded doctoral students don't benefit much from this very good situation of FER.</p> <p>Recommendation: Involve self-funded and industry funded students in research projects.</p> <p>The FER development strategy 2013-2017 explicitly formulates the objective "Improvement of international recognition of the studies at FER and increasing of the mobility of students and teaching staff". Activities for reaching this objective promote the use of English for courses or as the language of choice for publications. However, the outcome of a doctoral programme is PhD-thesis. Unfortunately, still a large number of the PhD-theses written at FER is written in Croatian.</p> <p>Recommendation: FER should ensure that the majority of PhD-theses is written in English. This is to ensure that the research is available for the larger research community outside of the Croatian-speaking.</p>

<p>2.3. The HEI systematically monitors the success of the programmes through periodic reviews, and implements improvements.</p>	<p>Improvements are necessary</p> <p>Quality assurance of the FER doctoral programme is performed according to the official regulations of the University of Zagreb. The quality assurance procedures are accompanied by official forms.</p> <p>FER monitors doctoral students by keeping personal files that document the study progress of each student. The FER Board for doctoral studies monitors workload and performance of the supervisors. This includes statistics about doctoral students assigned to a supervisor and completed PhD projects.</p> <p>Recommendations: The Expert Panel noticed that no representative of the doctoral students is member of the Board of doctoral studies. A representative of the PhD students in the Board of doctoral studies may help to identify problems earlier and to gather further information and opinions from the doctoral students. We encourage FER to take a representative of the doctoral students in the Board of doctoral studies.</p> <p>Supervisors and PhD students have to provide annual reports on the study progress. Based on these reports, the Board for doctoral studies performs an annual self-evaluation of the doctoral programme and presents a summary to the Faculty council of FER.</p> <p>The annual reports of the doctoral students are used to monitor their study progress. This monitoring seems to be very effective, but unfortunately, it starts with the acceptance of the thesis proposal which is planned to be defended after the “first year”. This first year comprises most of the mandatory course work of the doctoral studies and this first year seems to take much longer than 12 months. There is a gap in the monitoring of doctoral students for the time starting from enrolment until acceptance of the thesis proposal. Monitoring the progress in the first year is important, because the Expert Panel gets the impression that most students, especially self-funded and industry-funded candidates, drop out before the defence and acceptance of the thesis proposal, i.e., in the “first year”.</p> <p>Recommendation: The monitoring of doctoral students should comprise the total time a PhD-student uses from enrolment to dissertation defence.</p> <p>Recommendation: There is also a need to have a better review of the failure rates and reasons of candidates, especially for self-funded and industry-funded candidates.</p> <p>The average duration for a PhD in FER is 6.72 years</p>
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	<p>although the doctoral programme is designed for duration of 3 years.</p> <p>Recommendation: The reasons for the overlong duration of doctoral studies need to be investigated and countermeasures need to be implemented.</p> <p>According to the official regulations, the University of Zagreb performs periodic internal evaluations for all doctoral programmes. The evaluations are based on the annual reports and statistical information, e.g., average duration of doctoral studies, number of completed PhD projects, number of new students, or dropout rate.</p> <p>The last periodic internal evaluation was performed in 2013. The evaluation was positive and FER completed the implementation of all necessary improvements and changes by September 30, 2014.</p>
<p>2.4. HEI continuously monitors supervisors' performance and has mechanisms for evaluating supervisors, and, if necessary, changing them and mediating between the supervisors and the candidates.</p>	<p>High level of quality</p> <p>The supervision of doctoral students requires the participation in a mentoring workshop of the University or a similar recognised training before the first appointment as thesis supervisor. Where appropriate dual mentorship is encouraged. The general feeling of the Expert Panel, based on the interviews with the doctoral students, is that the students are very satisfied with the overall supervision.</p> <p>The supervision of doctoral students is mainly monitored through the annual reports of the doctoral candidates. Problems identified through the annual reports are followed on an individual basis.</p> <p>FER implements the procedure for changing the thesis supervisor and/or thesis topic in accordance to the official regulations. In general, all issues raised either by doctoral students or mentors are handled by the Board for doctoral studies or mediated by the chair of the Board.</p> <p>The performance of supervisors is evaluated based on the number of assigned doctoral students which completed their doctorates. The Panel believes that this statistical indicator is not sufficient for the performance evaluation of supervisors.</p> <p>Recommendation: Consider further statistical indicators for the performance evaluation of supervisors, e.g., average duration of completed PhD projects, or failure rates. For the latter indicator: a change of the supervisor shall not be considered as failure.</p> <p>The SER states that there is currently no reward system in place for recognizing outstanding supervisor performance. The Expert Panel believes that such reward system would</p>

	<p>be an incentive for dedicated mentors. Recommendation: Consider the implementation of reward system for dedicated supervisors.</p>
<p>2.5. HEI assures academic integrity and freedom.</p>	<p>Improvements are necessary The principles of moral, professional ethics and freedom of scientific research are specified in a Code of Ethics. All employees of the University of Zagreb have to follow these principles. FER adopts the Code of Ethics without further interpretation. FER relies on the correct interpretation of the principles in the Code of Ethics by its researchers, doctoral students and employees. Especially for young researchers this can be problematic. Recommendation: Implement an additional mandatory workshop for acquiring generic skills on good scientific practice and ethics. The workshop themes may also include measures for the prevention of plagiarism and consequences of violating the principles of ethics and good scientific practice. FER implements the prevention of plagiarism through mentoring, clear appointment criteria for experts participating in doctoral committees and the mandatory inclusion of at least one external expert in thesis evaluation. Unfortunately, the prevention and detection plagiarism is only relying on the expertise of the experts. A large number of PhD theses is written in Croatian (i. e., international experts will not able to read and detect plagiarism), the retrieval of completed PhD theses from the library is cumbersome (but possible), and the experts are not supported by a plagiarism detection tool. Recommendation: The current measures for prevention of plagiarism should be accompanied by: (1) ensuring that the majority of PhD theses written at FER are written in English, (2) easing the access to completed PhD theses, and (3) the provision of plagiarism detection tools.</p>
<p>2.6. The process of developing and defending the thesis proposal is transparent and objective, and includes a public presentation.</p>	<p>High level of quality The process of developing and defending the thesis proposal is transparent and objective, and includes a public presentation. The procedures are defined in regulations and well supported by forms. Regulations and forms are available on the Web.</p>
<p>2.7. Thesis assessment results from a scientifically sound assessment of an independent committee.</p>	<p>High level of quality The procedures for development and defence of doctoral theses are transparently specified in official regulations. The procedures are supported by standard forms, e.g.,</p>

	<p>templates for recording the dissertation defence.</p> <p>Doctoral theses can be submitted in form of monographs or in form of a collection of papers accompanied with a survey chapter (cumulative dissertation).</p> <p>Mandatory prerequisites for the dissertation defence are two internationally peer-reviewed publications in the research area of the thesis. One publication must be published or at least accepted for publication in an international indexed journal. The other publication is a conference paper. The paper must be published in the proceedings of an international conference and be presented by the student.</p> <p>At least one member in all dissertation evaluation and defence committee has to be external. For dissertations written and defended in English, it is common practice to invite experts from abroad into evaluation and defence committees.</p> <p>Unfortunately, most doctoral theses are still written in Croatian (with the published works mainly written in English). This precludes the evaluation committee from being truly international, as only academics who can read Croatian are eligible as evaluators.</p> <p>Recommendation: We encourage FER to invite more experts from abroad into theses evaluation and defence committees. For this, FER has to facilitate the usage of the English language for thesis writing.</p>
<p>2.8. The HEI publishes all necessary information on the study programme, admissions, delivery and conditions for progression and completion, in accessible outlets and media.</p>	<p>Improvements are necessary</p> <p>The students gave the impression that they are well informed about all necessary information on the study programme, admissions, delivery and conditions for progression and completion. Unfortunately most of the important information is only available in Croatian. The positive exception of information available in English is the list of available courses. It is explicitly stated that international students will be taught in English.</p> <p>Recommendations: For attracting international students all necessary information on the study programme has to be made available in English.</p>
<p>2.9. Funds collected for the needs of doctoral education are distributed transparently and in a way that ensures sustainability and further development of doctoral education (ensures that candidates' research is carried out and supported, so that</p>	<p>Improvements are necessary</p> <p>Funds collected for the needs of doctoral education are allocated to the cost categories (1) teaching, (2) mentoring, (3) costs of research equipment and laboratories, and (4) specific material costs of doctoral work. These cost categories are reasonable. Unfortunately, it remains unclear how the allocation is done (equally or according to</p>

<p>doctoral education can be completed successfully).</p>	<p>a given allocation formula) and if the funds collected for doctoral education comprises tuition fees only or if FER also uses other funding sources (e.g., basic funding from the University of Zagreb).</p> <p>In addition, the number of doctoral students for a cost-covering doctoral education is also unknown. The usage of earnings from collected funds and the handling with deficits would also be of interest for the Expert Panel.</p> <p>Recommendations: The distribution of funds was not transparent for the Expert Panel.</p> <p>The FER funding of doctoral students through specialised project calls through the Croatian national projects, international projects, and industry projects is exemplary. Commendable is also the awarding of doctoral scholarships to the best Master-level students from FER funding.</p> <p>Recommendations: The Panel encourages FER to use more own funding to support doctoral education. The funding may not only be used for scholarships, but also for financing internationally recognised guest researchers or guest lecturers.</p> <p>The FER efforts to modernise the doctoral education mentioned in the Self-Evaluation Report (e.g., participation in the “training-the-trainers” projects and workshops at the University of Zagreb) are valuable efforts for ensuring sustainability and further development of the doctoral education.</p>
<p>2.10. Tuition fees are determined on the basis of transparent criteria (and real costs of studying).</p>	<p>High level of quality</p> <p>The tuition fee is determined on the basis of transparent criteria based on the study cost estimation per student.</p>
<p>3. SUPPORT TO DOCTORAL CANDIDATES AND THEIR PROGRESSION</p>	
<p>3.1. The HEI establishes admission quotas with respect to its teaching and supervision capacities.</p>	<p>Improvements are necessary</p> <p>FER monitors the qualifications of supervisors regularly and before the assignment of a new candidate. The candidate must fill in the supervisor’s qualifications as a mandatory part of the candidate’s supervisor request document. In the case that a supervisor does not meet the requirements, a new supervisor (who meets the requirements) is assigned. While the overall average of candidates to mentors satisfies the 3:1 threshold. Table 2 (teachers and students) at the end of the Self Evaluation Report indicated that several mentors had more than 8 candidates.</p>

	<p>The Panel recommends that the FER encourages the distribution of PhD candidates among all research active teachers to ensure the effective supervision of PhD candidates and annually collects a feedback from the candidates of quality of supervision.</p>
<p>3.2. The HEI establishes admission quotas on the basis of scientific/ artistic, cultural, social, economic and other needs.</p>	<p>High level of quality</p> <p>According to the Self-Evaluation Report, FER is not aware of any PhDs who are unemployed as of May 2016. The Self-Evaluation Report also adds that, of the 185 PhDs who have graduated in the past five years, 130 are working in research and development within the public and private sector, while 4 have established innovative companies. In the past five years, 77.26% of PhD candidates were partially or fully funded by their employers (whether industry or faculty funded), and 22.74% of PhD candidates were self-funded. FER is involved in several public programmes that are aimed at increasing the involvement of private industry in research and development as well as programmes to support the development of new industries in Croatia. The Panel recommends and encourages FER to consider establishing formal mechanisms such as industrial advisory boards to stimulate the collaboration between FER and local industries.</p>
<p>3.3. The HEI establishes the admission quotas taking into account the funding available to the candidates, that is, on the basis of the absorption potentials of research projects or other sources of funding.</p>	<p>High level of quality</p> <p>In the past five years, FER has secured partial or full funding for 77.26% of the PhD candidates at the time of their enrolment in the program's first semester. 41.85% of these candidates were partially or fully-funded by projects at FER, for example as research or teaching assistants. A further 35.25% of the candidates were supported by industry. The Panel commends FER for its relatively low number of self-funded PhD candidates and encourages FER to continue its endeavour to reduce the number of self-funded PhD candidates by increasing engagement with industry and securing national and international (e.g. European) funding.</p> <p>Recommendations:</p> <p>The Panel encourages FER to ensure that candidates be fully funded (as opposed to being funded in part), regardless of the source of funding. A possible solution for ensuring that industry-funded candidates are fully funded is to include clauses in the cooperation agreement between FER and industrial partner that secure a three-year funding scheme for the candidates. Incentives for industry to invest in research and to fund postgraduate study can be</p>

	<p>suggested at the national level.</p> <p>The Panel realises that the Faculty is one of the most well-funded faculties in Croatia. The Panel recommends to consider providing a number of Faculty-funded stipends to further increase the number of fully funded student candidates.</p>
<p>3.4. The HEI should pay attention to the number of candidates admitted as to provide each with an advisor (a potential supervisor). From the point of admission to the end of doctoral education, efforts are invested so that each candidate has a sustainable research plan and is able to complete doctoral research successfully.</p>	<p>Improvements necessary</p> <p>In the application process, the potential candidate is required to specify his or her intended research area and identify a potential mentor who is qualified to supervise within the research area. The HEI has established a formal mechanism for monitoring the PhD candidate's progress from application to graduation. The Faculty Council is responsible for assigning a potential mentor upon admission of the candidate. The potential mentor supports the candidate through their coursework and initial research. A formal mentor is assigned at the moment the PhD thesis topic is successfully defended; typically, the potential mentor continues their support of the candidate as formal mentor. Annual reports are submitted by both the mentor and the candidate to provide feedback on the status of the PhD studies. The Panel found in its site visit that PhD candidates (both teaching assistants and not) are often spending more time teaching than is prescribed. Additionally, the requirement for candidates to acquire 30 ECTS credits at the beginning of their PhD studies can be prohibitive. Reducing the teaching and the required coursework, as well as allowing the candidates to start their research work as soon as possible, can help candidates dedicate more time to their PhD research and increase the chances of completing on time. It was found in the site visit that candidates are often working on research projects that are not directly supporting the progression of their PhD thesis completion. It is recommended that a candidate's PhD thesis research be harmonised with the funded research projects at FER. This could be achieved at the point in which the formal thesis topic is defined.</p> <p>The Panel recognises that the current economic situation and high education regulations in Croatia makes it difficult for Faculty-funded PhD candidates to complete their studies in less than the six years for which they are financially supported. In this respect, it would be advantageous for FER to ensure that the PhD thesis topic defence occurs within the first year of study with the option to extend to the second year of study in case the thesis topic is revised. A</p>

	strict two-year deadline for this process is highly recommended.
3.5. The HEI ensures that interested, talented and highly motivated candidates are recruited internationally.	<p>High level of quality</p> <p>The HEI advertises their doctoral study programme in the press and on FER website as calls for admission. The HEI organises and holds a PhD Day and Job Fair to showcase the research and activities to the general public. Specific researcher vacancies are indicated at these events to ensure interested students are aware of concrete opportunities at FER. These events are effective in attracting high quality students from Croatia and neighbouring countries. However, the presence of candidates from further abroad (non-Croatian speaking nations) is still low.</p> <p>Recommendations:</p> <p>1) The Panel recommends that FER takes steps to provide coursework in English and to work towards accrediting their study program in English. Meetings with supervisors indicate that the capacity and willingness to teach in English. At the moment, candidates who are interested in writing their thesis in English must formally request permission to do so.</p> <p>2) The Panel also recommends that the candidates are allowed to submit their PhD thesis in English without formal request which can be helpful to attract international candidates as well as support the attractiveness of completed PhDs to employers abroad.</p>
3.6. The selection process is public and based on choosing the best applicants.	<p>High level of quality</p> <p>Calls for admission are made public by advertising on FER's website and in the press. The HEI has well-defined admission requirements that are based on a quantitative evaluation of an applicant's academic performance (in the form of a minimum grade point average of 3.5/5.0). In the case that the applicant's grade point average falls outside of the minimum requirements, FER has a well-defined mechanism for evaluating the applicant's previous research achievements and, together with the potential mentor, determining whether the applicant has the capacity and motivation to effectively carry out the doctoral studies. An interview between the applicants and the Board for Doctoral Studies is carried out for every application.</p> <p>The Panel recommends that Faculty considers providing credits for a progress of postgraduate students for existing relevant experience and or existing papers.</p>
3.7. The HEI ensures that the selection	High level of quality

<p>procedure is transparent and in line with published criteria, and that there is a transparent complaints procedure.</p>	<p>The public calls for admission include details on the selection procedure and the requirements for successful admission. In the case that an applicant does not satisfy the requirements for admission to the PhD study, a written notification is sent detailing the reasons for rejection and recommendations for a successful application. A clear complaints procedure is not provided. While the admission criteria are clearly defined, it is recommended that a formal and clear complaints procedure be developed such that rejected applicants are provided with and aware of their right to complain.</p>
<p>3.8. There is a possibility to recognize applicants' and candidates' prior learning.</p>	<p>High level of quality The HEI has included in the admissions procedure a formal evaluation of an applicant's previous research achievements in the case that their academic performance does not satisfy FER's minimum requirements. The HEI's Board for Doctoral Studies will consider a candidate's request to recognise prior learning.</p>
<p>3.9. Candidates' rights and obligations are defined in relevant HEI regulations and a contract on studying that provides for a high level of supervisory and institutional support to the candidates.</p>	<p>Improvements are necessary The HEI provides relevant documents on the rights and obligations of candidates through the Regulations on Doctoral Studies. The Panel suggests that FER provide an introductory seminar to recently admitted candidates, in which the rights and obligations are outlined. Conversations with alumni and students suggest that candidates often are not ensured that they are provided with the necessary time to focus on their PhD research topic. The HEI does not currently offer candidates with a contract pertaining to their doctoral studies; however, the management has indicated that such a contract will be introduced. The Panel recommends that FER follow its plan to introduce such a contract on studying, and that this contract should be clear about the candidate's rights to ensure a timely completion of their studies. For example, the contract could include a clause ensuring that the candidates are provided with a minimum amount of time (in the form of percentage or number of hours per week) to perform research that will contribute to the successful completion of their PhD studies. The Panel found that industry-funded candidates were under exceptional pressure to prioritise their work over the successful and timely completion of their PhD studies. The HEI could consider engaging with industry to ensure that</p>

	<p>work contracts given to industry-funded PhD candidates could include a clause securing the PhD candidate's sufficient time to perform PhD-related activities, such as attending courses and laboratories, and traveling abroad for research secondments.</p>
<p>3.10. There are institutional support mechanisms for candidates' successful progression.</p>	<p>Improvements are necessary</p> <p>The HEI has implemented a requirement for candidates to publish at least one journal publication and to present their research in at least one international conference. The large number of journal and conference publications (more than 300 in the past five years) coming out of FER is a strong indicator of the effective support given to PhD candidates in this endeavour. A relatively large portion of PhD candidates are provided with financial support through funding from industry or public sources. Despite this, there is a large number of candidates who do not successfully complete their PhD studies.</p> <p>The Panel recommends that FER seeks additional sources of funding to ensure that candidates have financial support for their research and for attending international conferences. The HEI could consider, for example, a conference travel award to which candidates could apply. Additionally, the panel suggests that FER implement institutional (e.g. contractual) mechanisms to allow the researcher the time and resources to successfully complete their PhD studies on time.</p>
<p>4. PROGRAMME AND OUTCOMES</p>	
<p>4.1. The content and quality of the doctoral programme are aligned with internationally recognized standards.</p>	<p>High level of quality</p> <p>The programme which was presented to the Expert Panel meets the international standards, and in particular the requirements at European level as well as the CroQF.</p> <p>While the programme is of a high level of quality, some improvements are possible. In particular, the Panel makes the following recommendations:</p> <p>FER should aim for a better industry involvement.</p> <p>FER already has a very good level of interaction with the industry, as evidenced by the impressive number of stakeholders which were present to meet the Panel. Many stakeholders also found crucial the relation with the Faculty and the research done by their employees which follow the PhD programme.</p> <p>An observation however is that there seems to be a too frequent disconnection between the PhD topic and the industry job. There are several potential explanations for</p>

	<p>this, the focus on operational results rather than research by some of the local companies, considerations that the PhD is a personal project and not related to the work done at the company.</p> <p>This makes it difficult for industry-funded students to find time to work on thesis topic. There should be a target to better conciliate PhD thesis topic with work in the industry. For industry students, the teaching load (which for some of them covers tuition fee) and classes to follow leave too little time to the students to work on their research work. It is unclear how those students can achieve the requirement of 3 years of effective independent research work under such conditions and in reasonable time. A solution could be to encourage better connection between the research project and the work at the company. This could be achieved, for example, by a better involvement of the company in the definition of the project, this could, in exchange, provide some work time to dedicate to the research work (e. g., a number of hours per week). Another solution would be to reduce the numbers of courses students have to attend (for example, workshops on general skills could be considered acquired by the company experience or by reducing the number of ECTS to validate).</p>
<p>4.2. Programme learning outcomes, as well as the learning outcomes within it, are aligned with the level 8.2 of the CroQF. They clearly describe the competencies the candidates will develop during the doctoral programme, including the ethical requirements of doing research.</p>	<p>High level of quality</p> <p>The Faculty proposes a large number of courses which consist of a part of lectures and then consist in one-to-one consultations. Such courses are evaluated on projects, presentations or reports. This allows courses to be research oriented.</p> <p>Research ethics are addressed in the Code of Ethics, which is good, but it is unclear if this is enough. Research ethics are best transmitted while doing research and with the interaction with the advisor, which is difficult to evaluate. However, good controls needs to be in place to detect breaches of ethics, for example, official notification of breach of ethics or the use of automated plagiarism check tools (e.g., to check PhD thesis). It became evident discussing with the faculty that they have a high consideration for ethics in research. It was mentioned that international publications are an evidence of the absence of plagiarism. However, this could suggest that conferences are used as a detection mechanism which is inappropriate. The Panel recommends putting in place some evaluation mechanisms and means to detect problems such as plagiarism.</p>

<p>4.3. Programme learning outcomes are logically and clearly connected with teaching contents, as well as the contents included in supervision and research.</p>	<p>High level of quality Students were generally satisfied with the teaching and the supervision. Courses were in general aligned with the PhD thesis topic and supervision was suitable. However, in some cases there should be more support in definition of the research topic. There should be means to ensure an early definition of the research topic. This would also help with the selection of courses which are chosen to be in line with the research work.</p>
<p>4.4. The doctoral programme ensures the achievement of learning outcomes and competencies aligned with the level 8.2 of the CroQF.</p>	<p>High level of quality The doctoral programme presented a set of theses which were showing a good level of research work and confirms the quality of the programme. The HEI requires a publication in an indexed journal and a publication in an international scientific conference which should ensure a minimum level of quality. Unfortunately, the duration of journal review process thus often delays the completion of thesis. A solution to this could be to encourage submission of work to a journal earlier in the thesis.</p>
<p>4.5. Teaching methods (and ECTS, if applicable) are appropriate for level 8.2 of the CroQF and assure achievement of clearly defined learning outcomes.</p>	<p>Improvements necessary Most courses delivered to the PhD level are delivered with a few lectures followed by individual consultations and with an individual work which leads to a presentation or written report. In particular, the individual work should have connection with the doctoral research. However, one problem with the organization is that students will only defend their PhD proposal at the end of the first year (but in practice often later). Therefore, if such courses can be considered as the first approach to their research work, it is difficult to have the courses well aligned with the PhD topic as the topic is not defined yet. A solution to this could be to reduce the number of credits which has to be acquired in the first year. The most courses taken during PhD should be a majority of research oriented courses (projects, seminars). All activities should lead to credits, in particular, seminars as well as generic skills workshops should provide credits and count in the total credits obtained. If such activities are too short for providing credits, they could be aggregated in a module which groups all seminars. The Panel recommends counting all seminars and workshops with credits. Students needs more support and direction to define their research topic as soon as possible, and should not postpone this. The proposed topics need planning and the plans</p>

	needs to be constantly updated within the progress. Such updates should be easy to carry out using a simple procedure, if any.
4.6. The programme enables acquisition of general (transferable) skills.	<p>High level of quality</p> <p>The programme provides a number of generic skills workshops which are well suited for researcher and which are transferable. It is mandatory that students follow one such workshops and students can attend more. Students should earn ECTS for following those workshops.</p>
4.7. Teaching content is adapted to the needs of current and future research and candidates' training (individual course plans, generic skills etc.).	<p>High level of quality</p> <p>The programme contains a very diverse set of courses, general skills workshops and research seminars. All courses are elective and research oriented, with individual consultations and final evaluation in the form of a report or presentation. This allows students to select courses which are directly relevant to their research. However, because students typically submit their thesis proposal after they completed the mandatory courses they may have difficulty to forecast which courses will be actually important for their research work, which by definition, contains a part of unknowns and cannot be completely foretasted.</p>
4.8. The programme ensures quality through international connections and teacher and candidate mobility.	<p>Improvements are necessary</p> <p>The University of Zagreb and the FER regulations make possible internationalization through mobility and dual degrees. Furthermore, the FER is part of numerous European projects (FP7, then H2020) which lead to natural international collaborations. A significant number of students have benefited from this in particular with 47 visit of more than a month in the past 5 years.</p> <p>While there is an overall good level of internationalization, there are many points which could be improved.</p> <p>It is not very clear how well PhD students are informed about the availability of schemes (such as COST Short Term Scientific Missions). In particular, industry funded PhD students are also eligible to such scholarships and did not seem aware of this.</p> <p>Participation to international conferences should be facilitated, possibly even before students have a paper to present, this helps students to be acquainted with the world of research.</p> <p>While courses are listed in English and could be taught in English, the most information (slides, course material, general information, and lectures notes) is mostly in Croatian. This likely limits mobility and international</p>

attractiveness.

The current system with tuition fees may reduce attractiveness of Croatia as a destination for international students. A possible way to compensate this could be that some scholarships would be provided by FER to attract excellent international candidates.

The language in which the thesis is written is chosen early (during thesis proposal), and it seems that the procedure to change the language to English was found not straightforward to some students or was perceived as complicated. This procedure could be clarified, simplified or students may need better information.

*** NOTE: RECOMMENDATIONS OF THE EXPERT PANEL TO THE ASHE'S ACCREDITATION COUNCIL AND QUALITY LABEL**

The role of the Expert Panel in the re-accreditation of doctoral study programmes is manifold. The Expert Panel or part of the Expert Panel visiting a higher education institution drafts a report on the basis of a self-evaluation report, the accompanying relevant documentation, and a site visit to HEI. The draft report is adopted by all members of the Cluster Expert Panel, while the president of the Cluster Expert Panel is responsible for coordinating the assessment levels.

The report contains an assessment on whether a doctoral study programme delivered at a higher education institution complies with the prescribed laws and by-laws, as well as any additional/recommended requirements defined by the Agency's Accreditation Council, and whether a higher education institution can obtain a positive, i.e. satisfactory quality assessment according to the criteria set out in this document. Moreover, the Expert Panel must make recommendations for quality improvement.

Based on the assessment of all these elements, the Expert Panel may propose to the Accreditation Council of the Agency to issue either a confirmation on compliance, a letter of expectation for the period up to three (3) years in which period the higher education institution should eliminate the identified deficiencies, or to deny the license.

If the Expert Panel has assessed that a doctoral study programme delivered by a higher education institution does not meet legal and other requirements or that the quality of a study programme is not ensured (i.e. that HEI does not meet additional requirements or recommendations made by the Accreditation Council, or has a very poor quality assessment), they should propose to the Accreditation Council to deny the license.

If the Expert Panel considers that the relevant laws and bylaws have been met by a higher education institution, but that certain elements mentioned above do not meet the quality requirements, while they consider that the identified shortcomings can be corrected within a time frame of three years, they should issue a letter of expectation.

If the Expert Panel considers that all legal and additional/recommended requirements have been met and the quality assessment is satisfactory, i.e. that a study programme fulfils the learning outcomes appropriately defined for that level and scientific area, they may propose the issuance of a certificate and have a HEI commit to quality improvement and reporting to the Agency during the follow-up period.

Finally, if the Expert Panel has, in accordance with the criteria mentioned above, proposed issuing the certificate of compliance and assessed that, in addition to meeting the minimum quality requirements – i.e. the qualification framework level - for a study programme, the programme should be identified as a doctoral programme of a 'high level of quality', the Expert Panel may propose to the Agency's Accreditation Council that such a doctoral study programme be awarded the 'high quality label'. Thus the Agency, with the consent of the Accreditation Council, grants a higher education institution the right to use the label for their academic and promotional purposes.

The 'high quality label' cannot be proposed or awarded to a programme or a higher education institution that does not comply with the requirements laid down by the laws and bylaws mentioned

in this document, and any additional requirements recommended by the Accreditation Council. Moreover, the quality assessment awarded to a study programme should reflect a high level of quality inasmuch that at least half of the sub-criteria in each of the quality assessment criteria are assessed as being of high quality. The Accreditation Council of the Agency issues a final opinion on the label awarded. The content and form of the quality labels shall be prescribed by the Agency in a relevant general act.

The Accreditation Council of the Agency discusses the final report with all recommendations and suggestions, and issues their opinion on the report. Based on a prior opinion of the Accreditation Council, the Agency issues an Accreditation Recommendation to the minister responsible for science and higher education, and upon receipt of the minister's final decision on the outcome of the procedure, awards the 'high quality label' to a higher education institution.