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Republika Kosova - Republic of Kosovo



Agjencia e Kosovës për Akreditim
Agencija Kosova za Akreditaciju
Kosovo Accreditation Agency

UNIVERSITY OF PRISHTINA "HASAN PRISHTINA"
FACULTY OF ELECTRICAL AND COMPUTER ENGINEERING
DOCTORAL PROGRAMME IN ELECTRICAL AND COMPUTER
ENGINEERING

ACCREDITATION

REPORT OF THE EXPERT TEAM

26.07.2021, Prishtina



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1. INTRODUCTION

1.1. Context

Date of site visit: 5.07.2021

Expert Team (ET) members:

- *Prof. Dr. Peeter Normak*
- *Prof. Dr. Melita Kovacevic*

Coordinators from Kosovo Accreditation Agency (KAA):

- *Naim Gashi, Executive Director of KAA*
- *Shkelzen Gerxhaliu, Senior Officer for Evaluation and Monitoring*
- *Arianit Krasniqi, Senior Officer for Evaluation and Accreditation*
- *Leona Kovaci, Senior Officer for Evaluation and Monitoring*
- *Ilirjane Ademaj, Senior Officer for Evaluation and Monitoring*

Sources of information for the Report:

- *Self-Evaluation Report (SER)*
- *Self-Evaluation Report. Faculty of Electrical and Computer Engineering (SER-Faculty)*
- *Regulation for Doctoral Studies (2013 version)*
- *CVs of the academic staff*
- *Syllabi of the subjects*
- *PhD studies reporting forms (in Albanian)*

Additional documents requested

- *Regulation for Doctoral Studies (2021 version)*
- *Reports about the progress of PhD studies for 2013-2016*
- *List of members of the Faculty Council of Doctoral Studies*
- *The list of theses topics of doctoral candidates, with the indication of the supervisor(s).*

Additional documents received

- *Regulation for Doctoral Studies (2021 version)*
- *Reports about the progress of PhD studies for 2013-2016*



- *Decision on appointing the Council for Doctoral Studies at the Faculty of Electrical and Computer Engineering*
- *The list of these topics of doctoral candidates, with the indication of the supervisor(s).*

Criteria used for program evaluation:

- *Standards for Evaluation of Doctoral Programmes*

1.2. Site visit schedule

12:00 – 12:45	Meeting with the management of the institution/faculty where the programme is integrated Dean: Prof.Asoc.Dr.Isak Shabani, Vice deans: Prof.Asoc.Dr.Qamil Kabashi, Vice Dean for Teaching and Student Affairs Prof.Asoc.Dr.Milaim Zabeli, Vice Dean for Finance and Infrastructure and Prof.Asoc.Dr.Kadri Sylejmani, Vice Dean for Research and International Cooperation
12:50 – 13:50	Meeting with the head/s of a doctoral programme Prof.Dr.Blerim Rexha Prof.Dr.Luan Ahma Prof.Dr.Lule Ahmedi Prof.Asoc.Dr.Sabrije Osmanaj Prof.Asoc.Dr.Qamil Kabashi
13:55 – 14:50	Meeting with representatives of relevant doctoral committees, administrative and QA staff involved in doctoral programmes Prof.Asoc.Dr. Mimoza Ibrani, Vice-Rector Prof.Ass.Dr.Hëna Maloku, Coordinator for Academic Development at FECE, Besnik Loxha, Head of office for academic development at UP
14: 55 – 15:40	Meeting with research-teaching staff and supervisors Prof.Dr.Enver Hamiti, Prof.Asoc.Dr.Bujar Krasniqi Prof.Ass.Dr.Lavdim Kurtaj Prof.Asoc.Dr.Kadri Sylejmani Prof.Ass.Dr.Avni Rexhepi Prof.Ass.Dr.Bahri Prebreza



- 15:45 – 16:30** Meeting with doctoral candidates
MSc. Ramadan Dervishi, PhD candidate
MSc. Vehbi Neziri, PhD candidate
- 16:35 – 16:45** Internal meeting between expert team and KAA
- 16:50 – 17:00** Closing meeting with the management of the institution/doctoral programme
Prof.Asoc.Dr.Isak Shabani,
Prof.Ass.Dr.Hena Maloku

1.3. A brief overview of the institution and programme under evaluation

Faculty of Electrical and Computer Engineering (hereinafter the *Faculty* or FECE) of the University of Prishtina “Hasan Prishtina” was established in 1961 (under a different name), on the foundation of the Technical High School, which offered study programs in civil, electro-technical and mechanical engineering. After some restructuring and name changes, the Faculty has got its present name in 2001.

The Faculty has six departments: 1) Computer Engineering, 2) Electronics, 3) Computerized Automation with Robotics, 4) Power Engineering, 5) Telecommunications, 6) General Subjects.

The studies at the Faculty are concentrated in three main areas: 1) electricity generation and utilization, 2) information processing and transmission, and 3) computer engineering. The third group covers the analysis and design of computer systems, computer networks, software engineering, software systems security, operating systems, distributed and parallel systems, Web and data.

The Faculty has defined its mission in “educating the youth in the fields of Electric and Computer Engineering, at all levels of higher education, with the aim of preparing them for the demands of the labour market in the country and beyond, and for the continuous education in this highly dynamic field, and also to contribute directly to the sustainable technological, social and scientific development of Kosovo” (SER-Faculty, page 5).



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The Vision is to become a “national and international model of a contemporary and innovative faculty with integrated teaching, whereby practice complements theory and professional skills and research skills are developed for the benefit of society” (SER-Faculty, page 5).

Strategic objectives and strategy for achieving the mission and vision have been developed.

There are around 2200 students currently enrolled in FECE’s Bachelor programs and another 210 in its Master programs. There are only three students currently enrolled in the doctoral program. FECE counts among its personnel 33 full time academic staff, 24 part-time academic staff and 5 retired professors while there are 13 administrative employees.

Doctoral level studies in FECE are organized since the establishment of the university. In 1976, the first doctorate degree at FECE was defended. During the period 1976 – 2004, 25 doctoral candidates have graduated. Doctoral studies have only stopped in the period 2004-2009, in order to harmonize the studies with the new statute and European trends in higher education. In 2009, doctoral school was opened and 12 PhD students were enrolled. The accreditation of the study program was postponed twice by the KAA, once in 2018 because of the changes in the Board and the Management of the Kosovo Accreditation Agency and in the second time because of the emergence of COVID-19.

The timing of the evaluation of this study program had clearly failed because the SER was submitted to the KAA before the new *Regulation for Doctoral Studies* was approved by the University Senate. Consequently, the study programme – which was developed in accordance with the previous regulation – does not fully comply with the current regulation.



2. PROGRAMME EVALUATION: Doctoral programme in Electrical and Computer Engineering

2.1. INSTITUTIONAL STRUCTURE, ADMINISTRATIVE SUPPORT AND FUNDING

The doctoral program aims “to prepare students for a successful career in research, development and teaching through active coursework and research seminars using state of the art technology” (SER, page 2).

Doctoral studies, enrollment, doctoral studies, supervision as well as evaluation and defense of doctoral thesis are conducted according to the *Regulation for Doctoral Studies* (hereafter the *Regulation*). The Regulation states also other relevant clauses, such as objectives of doctoral studies, forms and stages of doctoral studies, etc. However, some clauses of the Regulation are confusing. For example:

- Doctoral candidates are supposed to collect the whole amount of 180 ECTS during three years of studies. This includes the completion and public defence of the doctoral thesis. On the other hand, according to Article 16 of the Regulation the doctoral candidate must submit to the council of the academic unit the completed doctoral dissertation for evaluation within 3 years from the day the topic was accepted by the UP Senate (what happens in the third semester)! Moreover, according to Article 8 of the Regulation, the studies can last up to six years (in some cases up to seven years).
- To register for the third semester, a doctoral candidate must have accumulated at least 36 ECTS, and for the fourth semester – 90 ECTS. Consequently, a doctoral candidate should collect up to $90 - 36 = 54$ ECTS during the third semester?
- A co-mentor can be from another university only and cannot be involved in mentoring more than one doctoral candidate at a time. Does it mean that a co-mentor cannot mentor doctoral candidates at his/her home university?

There are some provisions in the Regulation that impede the quality assurance of doctoral studies, the most important of which relate to the structure of study program, according to which the actual research on the thesis' topic can only be carried out in the second and third academic years (since the research proposal will be approved in the third semester).

More than 80% of courses are delivered by academic staff from FECE.



The SER contains a list of 44 papers of the academic staff from years 2017-2021. Eight staff members with PhD (B.Rexha, I.Shabani, K.Sylejmani, S.Osmanaj, L.Ahma, E.Hamiti, B.Krasniqi, Q.Kabashi) are among the authors at least for three publications (not always as the first author). However, as the corresponding authors were not indicated, it was not possible to decide by the SER how many of them have published at least 3 papers as 1st or corresponding author in the last 5 years. In the additionally submitted list of articles published in 2015-2020, there were 10 teachers who satisfy this condition.

About reviews and updating of the study programme: the doctoral studies council prepares each year the self-assessment report regarding the doctoral study program. However, the university regulations do not require annual update of study programs.

A website <https://fiek.uni-pr.edu/page.aspx?id=1,21#> is devoted to the doctoral program (in Albanian). Link in English language is not working.

The Strategic Plan of actions of FECE for 2021-2023 states development of doctoral programs as one of the strategic objectives. With the aim of increasing the international cooperation and integration into European Era of Higher Education, in the framework of the process of accreditation, it is foreseen to design doctoral studies in English language, which is in line with the Bologna system. However, there are no concrete actions planned to reach this strategic objective. Moreover, the doctoral program is not provided as a complete document that would cover all important elements of the doctoral program, incl. the purpose of the doctoral study program, the conditions of admission to the study program, the expected learning outcomes, the list of subjects etc.

Other academic institutions or professional associations are not represented in the Council for Doctoral Studies at FECE, it consists of the academic staff of FECE only.

Compliance level: substantially compliant

ET recommendations:

- 1. It is recommended to update the Regulation for Doctoral Studies considering the following aspects:*
 - 1) Strengthen the admission requirements (Article 7, section 5) by requesting submission (instead of the conceptual concept of research) of a Draft Doctoral Project, which describes the research problem and its topicality, research questions,*



research methodology, time-table, necessary resources, expected outcome and its possible applications.

- 2) *Revise the criteria for determining priority in selection order (Article 7, section 6), assigning at least 20 points to the Draft Doctoral Project.*
 - 3) *Since the nominal duration of doctoral studies is 3 years, research on the topic should start on the first semester already. Therefore, the total volume of professional subject exams should be reduced on 1st semester.*
 - 4) *Add a paragraph about the responsibilities of the university for supporting doctoral studies (providing a work place, access to data bases, participation on international conferences etc).*
 - 5) *Consider changing the grades of doctoral theses, as the currently used scale – excellent, very good, good, sufficient, fail - is not common for doctoral theses.*
2. *Renew the Council for Doctoral Studies to include representatives from professional associations and leading academic institutions.*
 3. *Compose a comprehensive document – Study Program Document – that covers all important elements of the study program.*
 4. *Develop and implement a system for the annual updating of the doctoral program.*
 5. *Create a website for the Doctorate program and Doctoral studies in English.*

2.2. SELECTION AND ADMISSION CRITERIA

The admission criteria are thoroughly described in the Regulation, Article 7. The doctoral candidates are selected by public competition; the competition will be announced at least one month before the start of the academic year.

The applicants must have a master's degree or equivalent education of relevant science. In the selection of doctoral candidates, research activity – measured by the number and quality of publications and presentations – is rated at a maximum value of up to 15 points and professional competences up to 30 points. Knowledge of English or a foreign language relevant to the field of study up to a maximum of 20 points. In total an applicant can get up to 100 points.



However, the Regulation does not foresee the status of a part-time doctoral candidates (in fact the Regulation does not differentiate doctoral candidates according to their status). This contradicts with the actual situation where doctoral candidates have normally in fact a full-time employment.

Compliance level: substantially compliant

ET recommendations:

- 1. It is recommended to update the Regulation for Doctoral Studies with a possible status of a part-time doctoral candidates.*
- 2. Add to the list of candidate evaluation criteria Draft Doctoral Project, which describes the research problem and its topicality, research questions, research methodology, time-table, necessary resources, expected outcome and its possible applications.*
- 3. Develop procedures for appointing potential supervisors for doctoral candidates prior to the filing deadline so that they can approve the Draft Doctoral Project.*

2.3. DOCTORAL PROGRAMME STRUCTURE/CONTENT

The SER does not disclose the content of the concept of research basedness: when explaining that the doctoral program is research based (section 2.3.1 of SER), the research basedness of doctoral **studies** is actually justified, not research basedness of the doctoral **program**. The concept "research based doctoral program" differs significantly from "research based doctoral studies": research basedness of a doctoral program means that its development was based on research where doctoral programs of leading universities, needs of the society, development trends of science and economy *etc.* were analysed. Although the responsible persons for the doctoral program claimed that these analyses were performed, no evidence was provided.

The nominal duration of doctoral studies for full time students is three years that can be extended by one more year. As mentioned above, there is supposed to be no part-time students.



The structure of the study program corresponds to the former version of the Regulation (adopted by the Senate on 9.09.2014), since the new Regulation (adopted 24.06.2021) was approved after submission of the SER. The whole first academic year (60 ECTS; 1/3 of the total amount of credits) is planned for courses: courses on different subjects on the first semester and courses on conducting research on different topics on the second semester. There are two lists of 20 and 24 courses of 6 ECTS each, from which students should select 5 courses (altogether $2 \times 5 = 10$ courses). The share of lectures and laboratory work varies a lot and makes in the average about 30% of total work load of students. There are no free electives in the study program, which makes it difficult to take courses from other universities.

Since the Regulation foresees a different structure of studies – especially in the second semester which does not contain traditional courses – the study program must be adapted.

As the third semester is mainly for the development of a doctoral project, and the 6th semester includes the defence of a thesis, in fact there will remain only three full semesters for research. This is normally not enough to compose a decent doctoral dissertation.

There are three institutional bodies relevant for doctoral education: 1) Doctoral Studies Council of the Faculty, 2) Faculty Council, 3) University level Central Council for Doctoral Studies. The supervisor(s) and the doctoral research proposal will be confirmed by the Faculty Council and the Doctoral Studies Council, respectively, by the end of the first academic year.

Doctoral candidates will be involved in completing international collaborative R&D projects and encouraged to apply for mobility grants. They must report to the Doctoral Studies Council about the progress in research done once a year; specific forms are developed for that.

The PhD student data collection such as enrollment, progress, grades etc. is carried out via *Electronic System for Student Management (SEMS)*.

Compliance level: partially compliant

ET recommendations:

1. *Analyze relevant doctoral programs at leading universities, as well as industry trends in Kosovo and the need for the top experts.*
2. *Modify the study program according to the Regulation and based on the results of the analysis mentioned above.*



2.4. RESEARCH ENVIRONMENT CAPACITY

The facilities for conducting activities are shared with the Faculty of Mechanical Engineering (FME) and the Faculty of Civil Engineering (FCE). An office for doctoral candidates and 143 000€ in the 2021 budget for upgrading the facilities are reserved. Additional resources are provided from different projects, in particular from PhDICTKES (“The development and implementation of a PhD Program in ICT for the Kosovo Education System”, <https://phdictkes.eu/>).

Access of doctoral candidates to the major data bases of academic publications is guaranteed through projects and partnership with foreign universities.

The university has adopted principles of ethical conduct for academic staff in the *Code of Ethics for the Academic Staff of the University of Prishtina “Hasan Prishtina”*. However, there are no internal regulations for the ethical conduct of students and administrative staff; some aspects of this are scattered across different documents. Article 7 of *Code of Ethics for the Academic Staff of the University of Prishtina “Hasan Prishtina”* states the forming of a Council of Ethics of the university which comprised of 5 members from among the teachers of the university.

According to the *Regulation for Doctoral Studies*, a mentor may take up to a maximum of two candidates registered within one academic year, but not more than three doctoral candidates at a time.

However, there are no acting research groups other than those formed around the professors, and consequently, no regular research seminars on broader research topics are conducted. Although the staff members are taking part in eleven (!) COST actions, involvement in no international joint **research project** was reported.

Compliance level: substantially compliant

ET recommendations:

1. *Determine the priority research areas of the Faculty and form research groups accordingly.*
2. *Find opportunities to participate in international research projects (for both supervisors and doctoral candidates).*
3. *Find a sustainable solution for accessing licenced scientific literature that does not depend on the availability of joint projects with foreign universities.*



4. *Develop code of ethical conduct for students and administrative staff, and publish in a separate document or update the existing document Code of Ethics for the Academic Staff of the University of Prishtina "Hasan Prishtina" with provisions for students and administrative staff.*

2.5. SUPERVISION

The *Regulation for Doctoral Studies* states that "The mentor must, without exception, be from the narrow scientific field from which the doctorate is prepared". The mentor must have a professor's title and have published at least three papers in international peer-reviewed journals, not necessarily in WoS or SCOPUS journals. However, even not all papers in the list of selected published papers of academic staff engaged in PhD program (SER, pages 45-51) were published in WoS or SCOPUS journals.

Prospective supervisors have participated in several international joint projects. However, these are mostly in the framework of different exchange programs, rather than joint research in the field of electrical and computer engineering.

As already mentioned, a supervisor may take up to a maximum of two candidates registered within one academic year, but not more than three candidates at a time. Co-mentorship is also possible. The doctoral candidates whom the ET met were very satisfied with the supervision.

The *Regulation for Doctoral Studies* describes the responsibilities of supervisors and doctoral candidates; responsibilities of the university and the Faculty are described indirectly. However, the Faculty and university do not take any financial obligations to support research activities, participation of doctoral candidates on international conferences etc.

For academic staff who have taken the mentorship for the first time, are organised mentoring workshops. These workshops were organised within the framework of different projects and do not have a regularity.

The major problem is that there may not be a supervisor during the whole first academic year. The cooperation between doctoral candidates and supervisors is not regulated in detail, which is why it largely depends on the practice of specific participants.



Compliance level: substantially compliant

ET recommendations:

1. *Develop a procedure for appointing a supervisor so that the doctoral candidate has a supervisor for the entire period of doctoral studies.*
2. *Stipulate the responsibilities of the university and its units (Faculty, library, doctoral studies office) in supporting the doctoral candidate's study and research activities and in training of supervisors.*

2.6. ASSESSMENT

Doctoral candidates are required, prior to the defense of the doctoral dissertation, to have published at least one scientific publication as the first author in an indexed journal.

The Regulation stipulates the number of credits that a student must collect in different semesters. However, there are no procedures in case the doctoral student does not do so in full (for example, if he / she has accumulated 89 credits by the end of the third semester). There is also no possibility of appeal in case the doctoral candidate does not consider the negative assessment to be adequate.

Although the university regulations state that the thesis should be a doctoral candidates original work, the ET was not provided any document stating the obligation of the doctoral candidate to confirm that the doctoral thesis is his/her original work. However, in practice the doctoral applicants confirm this – there is a separate page for this in the PhD thesis. The university has not systematically implemented any plagiarism detection software, and checking originality of students' written texts is not regulated. Again, in practice Plagiarism Check is used at the university.

For the assessment of the topic of the thesis and the thesis itself, three commissions are formed: 1) Proposal Evaluation Commission, 2) Thesis Evaluation Commission, 3) Defence of Doctoral Thesis Commission. Their roles are described in the *Regulation for Doctoral Studies*. According to Article 17, section (12), of the Regulation, the Defence of Doctoral Thesis Commission may be composed of the same members as the Thesis Evaluation Commission.



The Thesis Evaluation Commission should contain at least one member from a university outside Kosovo.

The Defence of Doctoral Thesis Commission uses the following positive gradings of doctoral theses: *excellent (great success), very good, good, sufficient, fail (impossible)*. The criteria for these grades are not defined. Procedures are determined for cases when the defence commission asserts the doctoral candidate has failed to defend the thesis.

The Defence of Doctoral Thesis Commission shall consist of three members. There are no quality requirements set for the members of the commission (as it can be different from the Thesis Evaluation Commission, the quality requirements of the members should be stated separately).

A supervisor may not serve as a member of the Evaluation Commission.

Compliance level: partially compliant

ET recommendations:

- 1. Set the qualification requirements for the members of the Defence of Doctoral Thesis Commission.*
- 2. Stipulate in the university regulations the doctoral candidat's obligation to confirm that the submitted doctoral thesis is his/her original work and develop a procedure for checking the originality of the doctoral thesis.*
- 3. Stipulate in the university regulations clear rules governing negative assessments and procedures for filing an appeal by doctoral students.*

2.7. DOCTORAL RESEARCH OUTCOME

The final outcome of the doctoral studies is a thesis. The doctoral thesis is an original scientific work, which is subject to public scientific evaluation. There are no further requirements set for a doctoral thesis.

The expected learning outcomes of the doctoral program are not stated in any regulative document, although the set of competences is listed in the SER (subsection 2.7.3).



The thesis shall be published on the University's websites at the latest one month after the defense. The doctoral thesis in hard copy shall be kept in three copies in the archive of the academic unit, three copies in the archive of the University and three copies in the Central University Library.

In case that the results of the research of the doctoral dissertation present an innovation, which needs to be protected with intellectual property rights, the doctoral candidate, with the consent of the mentor, before submitting the doctoral dissertation for evaluation, may request that the submitted doctoral dissertation be treated discreetly, until the time of public defense.

The rights of a student who has not completed his doctoral studies on time are not described in the university documents.

Compliance level: substantially compliant

ET recommendations:

1. *State the expected learning outcomes of the doctoral studies in an official document (Study Program Document).*

3. OVERALL EVALUATION AND RECOMMENDATION OF THE ET

The duration and structure of the doctoral study program prescribed by the university regulations generally do not allow for the preparation of doctoral theses, the level of which would correspond to the level of doctoral theses generally accepted in Europe. Three years of doctoral studies presupposes that the doctoral candidate is fully committed to doctoral studies, i.e. (s)he has no other professional responsibilities, either inside or outside the university. In essence, this means that doctoral candidates work full-time at the university as junior researchers or research assistants, without significant teaching or administrative obligations.

However, if this is not possible - for example, the university does not have the resources for this - doctoral candidates must be accepted to part-time studies of at least five years.

Another issue is related with the occasional over-centralization of doctoral studies at the university. For example, the authority of the Central Council of Doctoral Studies and the Senat



could be limited to general issues, and all decisions on concrete doctoral projects and theses could be made at the Faculty level.

Thus, the main disadvantages of the assessed study program are related to the rigid and sometimes inadequate regulation of doctoral studies at the university, and not to the faculty's inability to conduct doctoral studies - there are enough competent teachers at the faculty to supervise doctoral students. The current version of the *Regulation for Doctoral Studies* does not guarantee compliance with all standards of doctoral study programs.

In conclusion, the Expert Team considers that the doctoral programme Electrical and Computer Engineering offered by University of Prishtina is *Partially compliant* with the standards included in the *KAA Accreditation manual for doctoral programmes* and, therefore, recommends *not to accredit* the study program.

We strongly recommend revising the *Regulation for Doctoral Studies* of the university and resubmitting the revised study program for accreditation.

Expert Team

Chair

Peeter Normak

27.07.2021

(Signature)

(Print Name)

(Date)

Member

Melita Kovacevic

28.07.2021

(Signature)

(Print Name)

(Date)