



UNIVERSITY OF PRISHTINA “HASAN PRISHTINA”

Information and Communication Technologies
Master of Science

Reaccreditation

REPORT OF THE EXPERT TEAM

26.03.2024, Prishtinë

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1. INTRODUCTION

1.1. Context

Date of site visit: 26.03.2024

Expert Team (ET) members:

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Coordinators from Kosovo Accreditation Agency (KAA):

- *Shkelzen Gerxhaliu, Director of Department for Monitoring and Post-Accreditation Procedures*

Sources of information for the Report:

- *The Manual for External Evaluation of Higher Education Institutions*
- *Self-evaluation Report*
- *Syllabi of the courses*
- *CV-s of the academic staff*
- *University strategic plan*
- *Faculty strategy*
- *Student Statistics for recent years*
- *External Review Report*

Criteria used for institutional and program evaluations

- *Standards & performance indicators for external evaluation according to the KAA Accreditation Manual - Updated 2021*

1.2. Site visit schedule

<i>Time</i>	<i>Meeting</i>	<i>Participants</i>
09:00 – 09:50	<i>Meeting with the management of the faculty where the programme is integrated</i>	<i>Isak Shabani Qamil Kabashi Milaim Zabeli Bujar Krasniqi</i>
09:55 – 10:35	<i>Meeting with quality assurance representatives and administrative staff</i>	<i>Besnik Loxha Dhuratë Hyseni Qerim Behrami Vlora Shileku Reze Rudi</i>
10:40 – 11:50	<i>Meeting with the heads of the study programme</i>	<i>Mimoza Ibrani Hëna Maloku Valdete Rexhëbeqaj Bujar Krasniqi Zana Limani Fazliu</i>
11:50 – 12:50	<i>Lunch break</i>	-
12:50 – 13:40	<i>Visiting Facilities</i>	-
13:40 – 14:30	<i>Meeting with teaching staff</i>	<i>Enver Hamiti Qefsere Doko Avni Rexhepi Artan Mazrekaj Valon Raça Valon Veliu Jeta Dubruna Doruntine Berisha Agnesa Avdiu Miranda Kukaj Fatos Peci Rrezarta Thaqi</i>
14:35 – 15:20	<i>Meeting with students</i>	<i>Verona Zeqiri Dijar Gjinovci Atlantida Bytyqi Irida Jashanica Plator Bajraktari Blerona Mala Vullnet Laniku Fatbardha Bruqi Granit Bytyçi Arber Vitija Brisilda Zylfiu Gamze Troshupa</i>

<i>Time</i>	<i>Meeting</i>	<i>Participants</i>
15:25 – 16:10	<i>Meeting with graduates</i>	<i>Gent Brovia Elion Vucetaj Arzane Kastrati Ronita Gashi Eriola Haklaj Behare Grajcevc Krenare Krasniqi Elmaz Maloku Kaltrina Mustafa Lulzim Qela</i>
16:15 – 17:00	<i>Meeting with employers of graduates and external stakeholders</i>	<i>Sadri Berisha Fatbardh Dragusha Flamur Gosalci Shpet Berzati Valon Fetahu Krenar Rexhepi</i>
17:00 – 17:15	<i>Internal meeting of KAA staff and experts</i>	-
17:15 – 17:25	<i>Closing meeting with the management of the faculty and program</i>	<i>Isak Shabani Qamil Kabashi Milaim Zabeli Bujar Krasniqi</i>

1.3. A brief overview of the institution under evaluation

The University of Prishtina "Hasan Prishtina" stands as the oldest and largest institution of higher education in Kosovo, comprising 14 academic units with over 28,500 students, 1,450 academic staff, and 275 administrative support personnel.

The institution's vision emphasises quality assurance in higher education, alignment of study programs with labor market needs, and support for international mobility within EU exchange programs. Additionally, the University aims to enhance cooperation with European higher education institutions and promote research crucial to Kosovo's scientific, cultural, and economic development.

Established in 1961, Faculty of Electrical and Computer Engineering (FECE) operates within the University of Prishtina "Hasan Prishtina," focusing on contemporary and innovative education. With approximately 1951 active students and 38 full-time academic staff, FECE offers Bologna Declaration-aligned study programs in various fields of engineering.

FECE provides 7 Bachelor's and Master's degrees in Electronics, Automation and Robotics, Computer and Software Engineering, Information and Communication Technologies, Power Systems, and a PhD in Electrical and Computer Engineering.

The Information and Communication Technologies Master study program was accredited in 2021 for three years and was confirmed as being substantially compliant with the standards, with a number of 30 students to be enrolled in the program.

2. PROGRAM EVALUATION

2.1. Mission, Objectives and Administration

The University of Prishtina mission is focused “on academic development, scientific and artistic research, and the provision of higher education through programs of strategic and developmental interest to the Republic of Kosovo. The University enables the mobility of programs, students, and academic staff on an ongoing basis, intending to reach the international level and competition in the market.”

In the strategic plan implemented for years 2023-2025, the university set the following objectives:

- Increasing the quality of teaching and learning
- Advancement of science, innovation and connection with the labour market
- Improving the position and role of UP in the international scene
- Digitization and improvement of physical infrastructure
- Strengthening governance, integrity and financing

The strategic plan also includes KPIs which allow representatives to monitor the university's progress. Even though the university mission and strategy plan do not specify any study fields, the extended FECE strategy clarifies the scope of the study programme. Therefore, RT considers that both strategy and the study programme are aligned to the mission statement of the university.

The expected learning outcomes are developed in accordance with the National Qualifications Framework and the Framework for Qualifications of the European Higher Education Area. The faculty presented adequate mapping to qualifications and explained that the study programme content was based on experience of other universities, i.e.: University of Zagreb or University of Vienna.

The study program has an applied research focus: students have opportunities to be engaged in research projects, current research findings are included in course materials, and an emphasis is put on the development of research skills. Student centricity and market

orientation were stated as the overarching principles, however further development in terms of swift and reliable cooperation with the labour market should be considered.

The university's policies cover a wide range of topics, including accreditation standards, regulations on studies at all levels, quality assurance, academic mobility of students, and disciplinary procedures for academic staff and students, among others. The university also has guidelines on academic ethics, official and archival management, and protection of whistleblowers. All these documents are publicly available.

The University's Code of Ethics serves as a guiding framework for the behaviour expected from all university affiliates, including students, staff, and faculty members. It details essential principles and values and regulates issues such as plagiarism, academic misconduct, conflicts of interest, and harassment. In addition, the University has instituted entities like the Quality Assurance Committee, with responsibilities that include enforcing compliance with these regulations and probing any suspected infringement.

The Faculty Council periodically reviews faculty decisions at least annually or as required by changing conditions. Specific policies at the University of Prishtina, such as the Regulation on Master Studies and the Regulation on Selection and Appointment of Academic Staff, have been revised multiple times to enhance administrative procedures and research standards, respectively.

Even though the university established strong relationships with external stakeholders from various industries (industrial board of FECE) and started closer cooperation with the University of Iowa (USAID Mission) there is still room for improvement recognized by RT on the meeting with industry representatives. As in general public universities are not as swift as private ones in readjusting their activities to the latest technological trends and transferring scientific outcomes to the labour market. It is essential to enhance internal processes to cover gaps between current academic curricula and the rapidly evolving technological landscape, and extend involvement in transferring intellectual property to the local business sector.

Compliance level: Fully compliant

ET recommendations:

- 1. Strengthening collaboration between industry and FECE to furtherly improve the study programme and significantly contribute to the further development of local society.*

2.2. Quality Management

The formal system at the University of Prishtina encompasses a Regulation on Quality Assurance and Evaluation approved in 2016. This regulation also defines the role and responsibility of organizational and academic units at the University of Prishtina for carrying out quality assurance and evaluation activities. According to the Quality Assurance Regulation, the quality assurance processes cover a number of issues – teaching quality, services for students, scientific activity, international cooperation and resources. According to the SER, there are four types of quality evaluation instruments – academic staff questionnaires, questionnaires for course evaluation, administrative staff questionnaires and student questionnaires. There is a structure at the central level that explains the formal responsibilities of all parties. The evaluation process is administered at the central level but executed on the faculty level.

While the expert team is aware of the diverse practices at the University of Prishtina, despite the common regulations, the expert team would like to commend FECE and the university central management for successful cooperation in preparing the documentation relevant for accreditation. While the report could benefit from more analysis and self-reflection, the documents have been well arranged, the course descriptions follow a unified template and the self-evaluation report is accurate.

The FECE Strategic Plan 2021 – 2023, extended 2024 – 2025 lists a separate action line on Quality assurance and accreditation. The action line includes 9 strategic objectives – improving of teaching and learning in order to develop student competencies, quality of self-assessment reports, student scoring system, establishment of scholarships for short periods for conducting research visits abroad, doctoral programs at FECE in accordance with the Bologna system, improving the quality of teaching, learning and research activities at FECE, expanding FECE's relations with the labor market and civil society, involvement of students in quality improvement and increase quality performance. The Strategic Plan includes several indicators for each strategic objective, however, it is not fully clear how these indicators are monitored. It would be important to monitor their achievement on a regular basis and also report within and after the timeframe of the strategy execution.

The University of Prishtina Statute states that the evaluation of teaching, scientific research, and artistic work of staff shall be conducted in the following manner – internal evaluations through self-evaluation, questionnaires and self-evaluation conducted by academic staff, anonymous questionnaires of evaluation by students, analysis of parameters based on performance reports. The FECE Strategic Plan includes a related task and activity – development of mechanisms for receiving feedback from students and employers (survey, alumni, etc.) and survey with students (through online tools), employers and graduates (alumni), in order to receive feedback on the quality of teaching and learning at FECE. Recently, the centre for Alumni UP of the graduates was established within the University of Prishtina to maintain the link and correspondence with the graduates. This center distributes

two questionnaires – a questionnaire for graduates to evaluate the completion of the study program and the questionnaire for employers to assess the knowledge and the gaps of students who graduated from a specific study programme. The surveying of graduates and employers is, however, a very recent practice and not yet regular and embedded. On the faculty level the feedback from graduates is collected informally, mostly regarding the courses that could be included in the study programme. There is an Industry Advisory Council that functions on the level of faculty that is asked for input on these matters.

The first public reports on the results of surveys have been produced only very recently. It would be very important for the summary reports on employer and graduate feedback (but not limited to) to be produced at the FECE level to allow for the faculty community to get a clear overview on the faculty performance and allow for immediate translation into improvement actions.

FECE claims that the results generated on the basis of all evaluations are an integral part of planning for the next academic year in order to increase the quality. The quality assurance processes cover – programme planning, teaching and assessment, environmental conditions and resources, student feedback and evaluation, student assessment and feedback, professional development of staff, continuous programme review, monitoring of results and changes. The plans on implementation of expert recommendations are produced after each external evaluation and the expert team receives the examples of these reports. The expert team studied the summary reports produced on the university level. One sample was based on the feedback from academic staff, administrative staff and students. It contained a thorough analysis and a number of recommendations/ suggestions. However, it was not fully clear how these recommendations are further translated into actions and how their implementation is monitored.

SEMS is used to collect real-time information on student achievements. The information on course completion and student progression is registered there. Based on the external reports on the previous programmes, the expert team was concerned about the overall time it takes for a student to graduate from a study programme in FECE and the so-called “inactive” students. The bachelor programmes currently implemented by FECE are formally new and have been significantly revised compared to the previous ones and the first graduates are expected for 2024. However, the expert team urges FECE to monitor the situation of student progression closely and take actions in order to reduce the dropout.

It is understandable that the mission of the university is to provide quality education to its students and not necessarily accommodate the needs of working students at the bachelor level. However, in the IT sector working students is a global tendency. The expert team learned that on the master’s level the lectures are organised in the afternoon/ evening and this is the major reason that enables the students to attend. However, on the bachelor’s level the

expert team did not feel that this issue was sufficiently explored and that all possible actions by FECE are being taken.

The student survey has become mandatory at the University of Prishtina. Until then, there was a low response rate to student surveys. However, the hesitation of students to provide meaningful and/or critical feedback through these surveys exists and the students, especially on master's level where there are smaller student groups, prefer other ways of communication, for example, a direct conversation with a professor.

However, despite the remarks made in the analysis above, overall it is visible that there is a culture of continuous improvement at FECE that is reflected in formal documents and reports and also maintained in practice.

Compliance level: Substantially compliant

ET recommendations:

- 1. To perform analysis on the implementation of the FECE Strategic Plan and monitor the indicators related to all strategic aims;*
- 2. To produce summary reports on the feedback from academic staff, administrative staff, students, employers and graduates not only on the University level but also on the FECE level specifically;*
- 3. To ensure that the suggestions included in the summary reports result in certain actions for improvement and that their implementation is monitored;*
- 4. To complement the recently introduced practice of surveying employers and graduates with certain actions at the FECE level, either by directly receiving the data collected on the central level or by introducing complementary activity on the FECE level, to get immediate and up-to-date feedback;*
- 5. To take a close attention to student progression and drop-out rates in all FECE programmes, in particular on the bachelor level, in order to investigate the reasoning and prevent drop-out;*
- 6. Explore additional tools for obtaining quality and meaningful feedback from the students.*

2.3. Academic Staff

The Msc level ICT study program belongs to the Faculty of Electrical and Computer Engineering and is taught by 6 full-time employed academic staff; 5 part-time employed teaching staff from ICT industry for professional courses were engaged last academic year. Out of 6 full-time employed staff, 2 have academic title Prof.dr., 1 has academic title Prof.asoc.dr., and 1 is teaching assistant. The female gender represents more than 50% of full

time staff in Msc. ICT study program. Concerning the age distribution, more than 60 % of staff are younger than 40 years old. All academic staff have completed at least one cycle of study in EU/USA universities and/or have been co-supervised in master's and PhD levels by well-known international scientists.

The workload of academic staff includes: weekly teaching hours (6 for professor rank and 10 for assistants), weekly consultation slots with students (at least 3 x 1.5 hours), mentoring of thesis (at least 3 bachelor thesis per academic year), preparing and organising the intermediate student assessment (colloquiums, quizzes, midterm evaluations etc.), preparing and organising exams. Statistical quantification of promotion of the ICT study field to the community and of research work, participation in international conferences, serving as reviewer of international conferences and journals, evaluation of professional projects and participation in different professional committees are not provided, and we can only assume that the time dedicated to these activities is the complement to the 40 hours per week required by the academic contract. In research and professional projects, ICT staff cooperates with students, industry, and international peers. The results of such cooperation are disseminated via publications, reports, presentations etc. which are publicly available.

The full-time academic staff is recruited through meritocratic procedures, whose criteria and procedures are defined by the Statute of university and with Regulation on recruitment and promotion of academic staff, which are available on the web page of the University. Position descriptions and conditions of employment are advertised in public calls. Contracts for professor rank: assistant professor and associate professor are 4 years, while full professors have unlimited.

The full-time academic staff in this program complies with the legal requirements concerning the teaching positions, that is: academic staff engaged for lectures hold PhD and at least the title of Prof.ass.dr. in the field they are teaching; teaching assistants engaged for labs and exercises have at least Msc. Degree, but most of them are PhD candidates and some are from related industries. The course teachers hold the rank of at least Prof.ass.dr. and also they are first and/or corresponding authors of at least 2 journal papers published in ISI and Scopus indexed journals.

Full-time academic staff in the ICT department are engaged as full-time teaching staff in University of Prishtina only, and they do not have any other teaching activities in other higher education institutions. In addition, they do not cover, within an academic year, more than two teaching positions, one full-time/one part-time, regardless of the higher education institution they carry out activity. Part-time teaching staff are employed by the ICT industry and have only 1 part-time teaching contract for this ICT study program.

The majority of staff is full-time, while most of teaching (> 60 %) is carried out by full-time academic staff.

For this study program, *academic staff to students ratios* are comparable to well-known international universities offering study programs in engineering, making it possible for one academic staff to work with small groups and a low number of students. More than one PhD holder is engaged for each student group and for every 60 ECTS credits in the study program.

Various professional development opportunities are offered by this institution through the Center for Teaching Excellence Center. According to internal university regulations, each staff member is required to complete two teaching excellence training, and all listed staff from the ICT department have completed those trainings.

Senior academic staff develop a mentor-mentee relationship with junior staff, assisting and facilitating their career development through continuous guidance.

The ICT department staff have also completed other training courses organised within international capacity building projects.

The academic staff of the program under evaluation actively contribute to academic community, serving as:

- Reviewers at international peer reviewed journals indexed by ISI and Scopus such as: IEEE Journals, Springer Journals, Elsevier Journals etc.;
- Member of Organizing Committees and reviewers at national and international scientific and professional conference;
- Members of bachelor, master and PhD thesis evaluation and thesis public defence;
- Members of University and Faculty academic decision structures;
- Members of working groups for preparing, updating and developing courses and study programs;
- Coordinators and members of international projects on capacity building in higher education;
- Contributors on developing the laboratory setups and technical specifications;
- External evaluators of different research and professional, local and international projects, deliverables;

- Some academic staff participate in the development of higher education legislation and strategies and legislation in the ICT sector.

Academic staff are active in promoting the ICT study fields to society, industry and to high school students. They are members of: national ICT scientific subcommittee at Ministry of Education, authors of ICT of pre-university textbooks and provide high level expertise for ICT related issues in courts etc.

Academic staff evaluation is conducted regularly via different means:

- evaluation during recruitment or promotion procedure;
- self-evaluation of academic productivity by comparing with local and international standards, and with performance of peer colleagues from different universities;
- student's evaluation based on forms to be filled by each student at the end of each semester. Results are discussed with colleagues in department meeting and whereas necessary with faculty management level;
- peer evaluation, in forms of peer discussions and reflection during workshops, meetings etc.

Head of department on a regular basis reports to faculty management and faculty council about academic performance of staff. Results of each academic staff evaluation are considered during the procedure of staff promotion.

The results of evaluation of the department are shared and published according to university policies, defined within the University Statute and Internal Quality Assurance Regulation.

The proposal for quality enhancement (e.g., improving the teaching strategies and quality of learning materials, etc) is discussed at department level and with international peers, partners in capacity building projects. The delivery of study program includes: multimedia and VR technologies, project and problem-based learning, research oriented teaching, case studies, internship and industry invited lectures, field and lab work, e- platforms, software simulation; adopted course textbooks are authored by internationally well-reputed professors and are in line with those in used in other international universities. Locally-developed learning materials are peer reviewed from at least 2 professors from the same department, before they are distributed to students. Presentations to students are updated on yearly basis to reflect latest development trends in the respective areas.

The legal age of retirement is 65 years. Retirees may engage as a Part-Time staff and can teach until the age of 70 years if there is a need at the faculty level.

Compliance level: Substantially compliant

ET recommendations:

1. *Apart from the teaching load, the time dedicated by staff members to research and community service should be quantified and statistical information should be provided. Instead of a simple list of activities other than teaching, a quantitative estimate of the time spent by staff for different categories of activity should be provided.*
2. *A quantitative estimate of the staff members involvement in different activities, apart from teaching, should be specified; e.g., how many individuals are reviewers for international journals, how many are part of public committees, how many provide expertise to Court, etc.*

2.4. Educational Process Content

The study program education content is prepared to meet the declared qualification objectives (fitness for purpose approach). The program was inspired from the study programs offered by highly-ranked universities in the region and in the EU. To prepare the study program, curriculum and respective syllabuses, the all-inclusive consultation process with different stakeholders, both internal and external, was realised.

The program was circulated to peers from EU universities, partners in different international projects. Meetings with the ICT industry to collect their feedback were organised and their recommendations were included in the study program. Also, questionnaires to collect feedback from alumni and current students were distributed and results were taken into account during preparation of the study program.

The proposed study program includes specific subjects and interdisciplinary aspects, as well as soft and transversal skills, identified as necessary academic competencies by labour market representatives, enabling and ensuring smooth transition from studies to adequate employment in the ICT sector. The programme is research-oriented, however it includes courses which aim at developing practical and hands-on skills and competencies, in particular in the field of communication systems.

The first semester is designed to reinforce theoretical foundations of the students and advanced courses on networks, signal processing and coding are offered. A mandatory course to introduce students to Research Methodologies is also included. In the second semester, the

students are introduced to more advanced concepts in Wireless Networks and Network Performance as well as Machine learning techniques used for communication networks. Electives of several practical courses are offered as well as electives on transversal topics such as project management and regulation and standardisation in ICT are offered this semester as well. In the third semester the students besides a mandatory course on security and an internship course can choose three electives on advanced topics of their choice. The internship has been included as a stand-alone course with 6 allocated ECTS credits. The course is completed under the supervision of one academic staff from the Faculty and one representative from the organisation where the internship will be held.

The fourth and final semester is dedicated to the Master thesis, which will be conducted independently by the student under the supervision of one of the Professors of the Programme. The thesis is research-oriented and the students are expected to make a scientific contribution to the topic of their choice. The studies are successfully completed once the thesis is submitted and publicly defended.

Industry representatives outlined that student preparation about Cloud Computing was missing from the program syllabus.

This study program is developed in compliance with the standards of the European Higher Education Area, which is characterised by the pattern of studies in three cycles of study and where Master studies comprise the second cycle of studies with 120 ECTS. The compilation of the program with such standards enables students to move within the European study area and continue their studies abroad. The proposed study program complies with level VI requirements of National Qualification Framework (NQF). Kosovo NQF is fully harmonised with the European Qualification Framework.

The individual components of the program and the program as a whole include different forms of teaching and learning, such as lectures, lab exercises, numerical exercises, project based, problem based, research oriented, VR/AR supported content, seminars, practical assignments, software and hardware competencies, team work, soft skills and personal development opportunities, joint academy-industry supervision, invited lectures etc. The components are developed based on a student-centered approach.

The disciplines within the curriculum are provided in logical flow. The proposed study program is compatible with study programs offered by several well-reputed European Universities and was developed by Erasmus+ project DIMTV. Also, the initial original master study program was developed within the joint "Enhancing Telecommunication Education in Kosovo" project between FECE and University of Pittsburgh. The junior staff of FECE has finished master studies at Pittsburgh University and the study program curricula were

developed by FECE and Pittsburgh University staff. The structure in the proposed program remains comparable with additional courses to reflect the latest trends in the field.

Learning outcomes of the program are:

- Identify, define, describe and analyse complex problems in the field of ICT
- Interpret solutions for challenges in ICT by using proper methodologies and tools
- Implement and validate a system to meet requirements of the state of the art in ICT.
- Discuss efficiently and persuasively, in oral and written form with the ICT Community.
- Work efficiently as an individual or in teams
- Implement projects in the field of ICT that bring solutions with benefits to society.
- Track and evaluate the technology advancements and progress in the field of ICT.

All courses presented in this study program have a detailed analytical syllabus, in Albanian and English. The syllabuses contain: objectives, content, learning outcomes, distribution of classes, applicative activities, assessment methods, minimal bibliography, ECTS workload.

This study program is offered in Albanian language, in accordance with University Statute and applicable higher education law. The faculty offers a list of English taught courses for incoming students. Since the majority of staff has finished at least one degree in English language and is active in international cooperation, the teaching staff have no language barriers to offer content, part of study program or program as whole in English language, wherever it is needed.

Academic staff devote particular attention to the principle of integrity of relation student-professor, which is one of the foundations of the university's educational mission. The learning outcomes are developed with a student-centred approach and are discussed and elaborated with students in the first class of course, during syllabus elements presentation. The academic staff and students have different roles and responsibilities in reaching learning outcomes but they have convergent objectives: meeting learning outcomes and contributing to student's development. The course syllabus (distributed to students when courses start and made publicly available on the faculty website) serves as a kind of contract, whereby each of the parties is informed of responsibilities to reach learning outcomes.

The favourable number of academic staff that serve students in this study program make it easier to build partnership between staff and students, communicate effectively with students and track their progress towards expected course and study program learning outcomes.

The teaching methodologies in this study program are diverse and teaching strategies are fitted based on different types of learning outcomes.

The teaching flexibility expands taking care that some students need more tutorials, others more labs; adopting a grouping strategy enabling students to complement and support each other, learn from each other; and well balancing the teaching/supervision time.

Also, the study program with few elective courses' paths enables flexibility to meet the needs of different groups of students. Some might select more professional courses, others more research oriented.

The syllabus of each course specifies the teaching methods. Syllabi are made available to students through the faculty electronic system (SEMS) together with course material.

Assessment methods are adopted according to the teaching methods and expected learning outcomes. The University Statute and other regulations on bachelor level studies regulate the procedure of student's complaint and appeal about assessment.

The grading scale is according to the Statute of University, ranking from 5 (fail) to 10 (excellent). The grading system has equivalence with the ECTS grading system. The grading performance and standards are regularly discussed at department meetings, serving as indicator to make grading system comparable in courses offered within a program

In case the students' achievements are insufficient, they will have the opportunity to ask their teachers and assistants to support their performance enhancement. The Faculty Council and the Complaints Commission will treat the students' complaints within statutory rules and deadlines.

Policies and procedures to be followed, and actions to be taken in cases where standards of student achievement are inadequate or inconsistently assessed, are regulated at the University level.

An Internship course is planned in the third semester (6 ECTS credits). The Internship will be conducted at a company or institution that operates in the field of communication systems/communication networks. During Internship, students have a supervisor from academic staff and a supervisor from industry. The internship activity is monitored through activity reports. The academic supervisor illustrates, at the beginning of course, what is expected from students, how to behave at the workplace and how their Internship learning will be assessed. After Internship, the student prepares a presentation that is open, and is presented in front of an academic supervisor and representative from industry.

Examples of companies offering internships are: PTK (Post Telecom of Kosovo), IPKO (Telecom provider), private companies in the ICT sector, like Interadria, 3CISS, Nexxio, TeLos, governmental agencies, etc.

The University of Prishtina and the Faculty of Electrical and Computer Engineering have a significant number of agreements signed with public institutions and private companies. One of the main aspects regulated with MoUs, is realisation of Internships.

Compliance level: Substantially compliant

ET recommendations:

1. *Include in the syllabus a course on Cloud Computing.*
2. *Teaching of the entire program in English language is highly recommended, to enhance the possibilities of students to find better-qualified jobs and easily reach the international job market.*

2.5. Students

In the case of the ICT master study program at the Faculty of Electrical and Computer Engineering (FECE), student admission follows a transparent process through a public call for admission. This call specifies the admission criteria, which all candidates must meet to be eligible for application. The number of students to be admitted is determined by the department and subsequently approved by the faculty council and university senate, by the limits set by the Kosovo Accreditation Agency (AKA). Preliminary results are then published on the faculty webpage, providing transparency to all applicants.

Candidates dissatisfied with the results can file a complaint within a specified deadline, ensuring accountability and recourse in case of grievances. To facilitate a smooth admission process, an admission committee is proposed by the department and approved by the faculty council. This committee oversees the entire admission process, including result publication, ensuring that the admission procedure is conducted fairly and consistently for all applicants (<https://apliko.uni-pr.edu/>).

Candidates are eligible to apply if they have completed a bachelor's degree with either 240 ECTS credits (equivalent to four years of study) for master programs with 60 ECTS credits, or 180 ECTS credits (equivalent to three years of study) for master programs with 120 ECTS credits. This requirement ensures that students have attained the necessary academic background to pursue advanced studies at the master's level. Additionally, candidates who have completed their bachelor's studies abroad are also eligible to apply, provided that their

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diploma has been recognized by the Ministry of Education, Science, and Technology (MEST) of the Republic of Kosovo. This provision ensures that students from diverse educational backgrounds can pursue master's studies at the university, following MEST regulations.

While the specific details regarding the size of study groups are not provided in the SER, during the on-site visit, laboratories and classrooms were inspected, and the available seating capacity for student groups was checked.

Assessment of student knowledge is conducted through various methods including exams, colloquia, seminar papers, practical tests, and project presentations. Exams are typically organised by course professors and teaching assistants within specified exam terms (January, June, and September).

Students receive prompt and continuous notification of their exam results through SEMS, the FECE website, or emails. They are also encouraged to request individual sessions with professors if they have concerns or uncertainties about their evaluation. In case of disagreement with the assessment, students have the right to file a written complaint to the Dean of FECE. This may prompt the exam to be reviewed by a commission appointed by the faculty council, ensuring fairness and transparency in the assessment process.

Utilising the SEMS electronic platform (<https://sems.uni-pr.edu/>), student performance in various courses is meticulously recorded and confirmed at the end of each semester. This platform serves as a central repository for all student records, ensuring accessibility to administration, faculty, and university management. Transparency and accountability are prioritised through the availability of records, allowing stakeholders to verify student achievements and progress. Moreover, the university sets clear completion requirements for students, mandating the fulfilment of all obligations, successful completion of ICT master study program courses, and a satisfactory thesis defense. Upon meeting these requirements, students are awarded the title of 'master of science,' signifying their proficiency in their chosen field of study.

The university ensures that students can complete their studies within a reasonable timeframe, typically within four years, known as the double period of the study duration. However, recognizing that unforeseen situations may arise, the university grants students the option to extend their study duration in special cases. Should a student be unable to fulfil all study obligations within the prescribed period, they have the right to request an extension of one or two additional years. This request must be justified and submitted to the faculty council for consideration.

Upon review, if the faculty council deems the request to be valid, the student's study duration is extended accordingly. This flexible approach acknowledges the diverse circumstances

students may face and ensures that they are provided with the necessary support to complete their academic endeavors.

Records are stored in SEMS and analysed at the department level. If a course exhibits low completion rates, the professor meets with the department head to address underlying issues and devise improvement strategies. This analysis also extends to the program annually, ensuring proactive measures to enhance overall educational quality and student success.

Within the Faculty of Electrical and Computer Engineering (FECE), measures are in place to safeguard the integrity, quality, and ethical aspects of research and academic submissions. Ethical and disciplinary commissions operate at the faculty level to address any suspected violations, ensuring thorough review and appropriate action. Furthermore, the University of Prishtina, in conjunction with the Ministry of Education, Science, and Technology (MEST) of the Republic of Kosovo, has established a system for detecting plagiarism. This centralized system aids in identifying any instances of duplication or potential abuse by students.

Despite the fact that the staff at FECE is equipped with approximately 20 licenses for the web platform plagiarism check (<https://plagiarismcheck.org/>), which assists in detecting similarities in submitted work and generating unbiased results, they do not have software prepared for the rapidly growing field of artificial intelligence.

The university informs students promptly about their rights and relevant procedures, outlined in the university statute available on the website (<https://uni-pr.edu/desk/inc/media/661032D5-33DD-4CD6-B20F-BFE0AB89FB98.pdf>). Student interests are represented through bodies like the Student Parliament and Student Council (<https://uni-pr.edu/page.aspx?id=2,15>), allowing them to voice concerns and participate in decision-making processes.

According to the University of Prishtina's statute, students have the right to transfer between study programs if they pass at least 50% of relevant courses in their previous program. To initiate a transfer, students must submit a request to the study committee of the faculty where they wish to continue their studies, along with evidence of meeting the transfer criteria. The faculty council, upon recommendation from the study committee, decides on transfer requests. These regulations also apply to students transferring from other universities to the University of Prishtina. Transfer procedures adhere to standard legal and statutory provisions, with special provisions in place for transferring ECTS credits.

At the Faculty of Electrical and Computer Engineering (FECE), these requirements are met through structured processes. During the initial lecture of each course, teachers provide students with the course syllabus and the schedule of consultation hours. This schedule is not only published on the FECE website but also displayed at the entrances of faculty staff offices, ensuring easy accessibility for students (<https://sems.uni-pr.edu/OrariLU>).

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In addition to scheduled consultation hours, students are actively encouraged to approach teaching staff for any relevant requests or needs. This open-door policy fosters a supportive learning environment and facilitates student-teacher interaction. Furthermore, to accommodate special cases or students' preferences, consultations can also be conducted online upon request.

Compliance level: Fully compliant

ET recommendations:

- 1. The career centre should be focused specifically on the faculty rather than being generalised for the entire university.*
- 2. Continue improving the plagiarism detection system and update it with artificial intelligence (AI) technologies.*
- 3. Integrating a psychological counseling service and actively promoting the importance of mental health awareness.*

2.6. Research

The research objectives and activities of the ICT Department are aligned with strategic documents at the national level, as well as strategic documents at the University level. The FECE Institute, established in 2021, supports the academic staff in applying for research grants and projects and facilitates the project management aspects. The Institute will also oversee and manage research and consultancy services rendered to third parties by academic staff.

The research objectives of the programme, as stated by the Mission and Objectives, are in line with all internal Mission and Vision documents. The research objectives of this study programme are focused on:

- To develop creative and innovative capacities in problem consideration, solution proposals and critical thinking in ICT.
- Continually advance with new knowledge, competencies and skills that are offered to be in line with industry requirements.
- To produce capable candidates for further scientific, research and development work assignments, prepared for 3rd cycle studies and other lifelong study patterns.

Students are introduced to research concepts and to the scientific method in various courses. Students in the ICT MSc Program are expected to contribute to research conducted at faculty level by participating in studies, experimental and measurement campaigns and other research activities. In addition, many of the courses offered in the program have research components and expect students to conduct small-scale research projects within the course load. Ultimately, students will be expected to perform independent novel research work

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during their internship placement and thesis work, as they will work on a particular, well-defined project at the organization where the internship will be held, under the guidance of a university mentor and a supervisor appointed from the industry. Novelty and research contribution is an important component of the thesis work at the MSc level.

The expectations for teaching staff involvement in research and scholarly activities are specified in the regulations for appointment of Academic Staff, as follows:

- Assistant Professor (recruitment) must have at least one paper published in a reputable international journal as a first or corresponding author, and one monograph in addition to teaching experience
- Associate Professor (promotion) must have at least 3 papers published in reputable international journals as a first or corresponding author, and more than one monograph
- Full Professor (promotion) must have at least 5 papers published in reputable international journals as a first or corresponding author, and more than one monograph. In addition, the candidate must have participated in at least 3 scientific conferences, of which at least one is international. They also must have participated in at least one research project (individually or as part of a research group), and have mentored at least two Master students and one PhD student.

The regulation also defines which types of publications and publication venues are acceptable, and how they are weighed when evaluating the scientific contribution of the academic staff during recruitment and promotion processes.

However, citations -as a metric to measure researchers' impact- are not taken into account.

Scientific research activities are regulated at the national and university level. There are currently two Regulations addressing research outcomes of the University academic staff. Articles published in journals indexed by Web of Science (SCIE, SSCI and AHCI), articles in journals not included in Web of Science but indexed in Scopus, monographs, books and book chapters published under the affiliation of the University of Prishtina by reputable publishing houses (the list is provided in the Regulation) are acceptable research activities; also, the participation in international conferences, congresses, symposia, or national events organised under the tutelage of international editorial boards are valid research activities; finally, individual and group research projects are also acceptable with the condition that the outputs are properly disseminated.

A Committee for Ethics in Scientific Research was established at the University level, and the Code of Research Conduct and Research Ethics -at the Faculty level- defines good scientific research practices and details the code of ethics for all researchers.

The academic staff of the ICT department produced significant research outputs and published results related to their research, as demonstrated by the publication list. Some of the research interests of the academic staff involved in the ICT program are in the areas of applied electromagnetics, antennas, communication systems, communication networks, interference mitigation and coexistence, IoT, cognitive radio, wireless networks, mobile networks (including 5G and 6G), ad hoc networks, vehicular networks, machine learning applications in communication networks, game theory applications in networking, signal and multimedia processing. The program features many of these topics as elective courses.

The academic staff consistently publish their work in recognized international journals covered by Web of Science or indexed in Scopus, as well as present and participate in international and national conferences.

The academic and research staff also provide expertise and consultancy services to third parties through the FECE Institute. Most notably, the academic staff is actively engaged in providing expertise services to the courts, regarding matters related to ICT, within the framework of an MoU between the University and Kosovo Judicial Council.

The research conducted at FECE is mainly validated through publications in peer-reviewed reputable international journals and national conferences.

The academic staff of the ICT department has participated and led several research projects, as well as benefited from Erasmus+ capacity-building projects.

FECE staff, in particular those in the Telecommunication/ICT Department have consistently performed research and produced research output above the required threshold of one publication per year. The drop in publications number in 2021 -due to pandemics- was promptly overcome in 2022.

All FECE full-time academic staff publish under the affiliation of Faculty of Electrical and Computer Engineering, University of Prishtina, as documented by their Google Scholar profiles.

The appointment of courses in the ICT programme are matched to the academic staff based on their scientific competences. For new staff, the openings aim at recruiting staff members to cover all subjects of the programme.

At the national level, the policies for ownership of intellectual property are defined within the Law on copyright and related rights.

University of Prishtina has established an incubator and entrepreneurship center (VentureUP), with the aim of facilitating the commercialization of innovative ideas generated from staff and students during research activities.

At the Faculty level, commercialization of research outputs and services is formalised through the new established FECE Institute.

Industry representatives recommend easing the procedures for approving research contracts: a bottleneck at the level of the University Administration appears to slow down or even impede the completion of the bureaucratic process or research contracts and donations as well. This limits the possibilities of researchers to promptly respond to Industry needs and reduces the chances of the academic staff to acquire resources that are profitable not only for themselves but also for the Institution.

Students are engaged in research projects, as well as other activities such as organising networking activities with industry. An example was provided of a measurement campaign to characterise the electromagnetic environment generated by wireless networks.

Compliance level: Substantially compliant

ET recommendations:

1. *Consider the possibility of introducing the number of citations (as a proxy for impact) in the metrics for the performance evaluation of academic staff.*
2. *Revise administrative procedures to ease the approval of research contracts with Industry, thus benefiting the academic staff and the Institution.*

2.7. Infrastructure and Resources

Spaces assigned to FECE consist of teaching rooms, amphitheatres, laboratories, offices, a meeting room, a library, a Faculty hall and a ceremony room, plus storage and technical spaces amounting to approx 8700 sq metres.

The following equipped laboratories belong to the faculty:

- Laboratory of Electrical Engineering and Circuits
- Laboratory of Physics

- Laboratory of Electronics
- Laboratory of Telecommunication and Applied Electromagnetics
- Advanced laboratory of computer and wireless networks
- Laboratory of Multimedia
- Laboratory of Programming
- Laboratory of IoT and Optical Communications
- Laboratory for research and innovation

Both students and graduates recommend renovating laboratory equipment. Visits to the labs evidenced that in many cases the instrumentation is obsolete, and some items are not functional.

The financial plan is managed by the rector's office. The financial plan includes all resources utilised by FECE, which offers four bachelor's degree programs and three master's degree programs. The estimated expenses for all academic units in 2023 and 2024 are 32.5 and 34.8 million euros, respectively, out of which 5.4 and 6.4 million euros are designated for capital investments. The 14 academic units at UP will receive approximately 2.3 and 2.4 million euros each for the years 2023 and 2024, respectively, with 0.38 and 0.45 million euros set aside for capital investments.

The Faculty of Electrical and Computer Engineering (FECE) at University of Prishtina holds property deeds for a technical faculties complex comprising laboratories, student canteens, and university apartments.

Concerning software licences for the disciplines of the study program, the curriculum largely relies on open-source or free software licences, such as community or academic editions, for most of its courses. In addition, as a public university, the faculty receives three software licences from the Government of Kosovo on a regular basis for the Microsoft Operating System, Microsoft Office 365 and Microsoft Azure.

The FECE library is equipped with 186 study carrels, while the hall of the faculty has 23 group study carrels that can accommodate 170 students. In addition, within the hall of the faculty, there are 16 separate sitting zones, with a total of 91 seats, which can be used for large group work or discussions. The project “Access to Scientific Libraries” of the US embassy provided 44 books and 62 new textbooks were provided by the Erasmus+ DiMTV project, exclusively for the courses of this study program.

Eleven rooms are owned by the faculty and are utilised for various purposes such as lectures, numerical exercises, and laboratory exercises. The lecture rooms can accommodate up to 70 students per group, while the numerical exercise rooms can hold up to 25 students per group. Thirteen laboratory spaces allocated to exercises and practical work: they can accommodate up to 12 students per group.

Concerning the library space and equipment:

- The number of seats in the reading rooms is 200, which is on average 2.3 seats per student.
- The number of seats in the group work rooms is 170, which is on average 2.1 seats per student.
- The stock of books in the library is 197; on average, there are 2.1 books per student.
- The University of Prishtina has the two following subscriptions to publication platforms and periodicals: Elsevier journal library and Perlego digital online library.

The infrastructure of FECE is also adapted to the students with special needs that include the following facilities:

- The building of the faculty has a wheelchair ramp at the entry,
- The elevator inside the building is functional,
- The first row of chairs at the amphitheatres is at the floor level and reserved for people with special needs,
- The teaching rooms are all flat and with dedicated zones for wheelchairs.

Compliance level: Substantially compliant

ET recommendations:

1. *Renovate laboratory instrumentation*

3. FINAL RECOMMENDATION OF THE ET

The Panel would like to commend the programme development team for their proactive engagement with the Panel during the accreditation visit. It is evident that a good level of care and attention has been given to the development of the new programme.

Standard	Compliance Level
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Mission, objectives and administration	Fully compliant
Quality management	Substantially compliant
Academic Staff	Substantially compliant
Educational Process Content	Substantially compliant
Students	Fully complaint
Research	Substantially compliant
Infrastructure and resources	Substantially compliant
Overall Compliance	Substantially Compliant

The overall compliance is assessed by the experts at the level of **Substantially Compliant**.

However, the following recommendations need to be considered in relation to the reaccreditation:

1. *Strengthening collaboration between industry and FECE to improve the study programme and contribute to the further development of society through the use of modern technological advancements;*
2. *To perform analysis on the implementation of the FECE Strategic Plan and monitor the indicators related to all strategic aims;*
3. *To produce summary reports on the feedback from academic staff, administrative staff, students, employers and graduates not only on the University level but also on the FECE level specifically;*
4. *To ensure that the suggestions included in the summary reports result in certain actions for improvement and that their implementation is monitored;*
5. *To complement the recently introduced practice of surveying employers and graduates with certain actions at the FECE level, either by directly receiving the data collected on the central level or by introducing complementary activity on the FECE level, to get immediate and up-to-date feedback;*
6. *To take a close attention to student progression and drop-out rates in all FECE programmes, in particular on the bachelor level, in order to investigate the reasoning and prevent drop-out;*
7. *Explore additional tools for obtaining quality and meaningful feedback from the students;*
8. *Apart from the teaching load, the time dedicated by staff members to research and community service should be quantified and statistical information should be provided. Instead of a simple list of activities other than teaching, a quantitative*

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estimate of the time spent by staff for different categories of activity should be provided;

- 9. A quantitative estimate of the staff members involvement in different activities, apart from teaching, should be specified; e.g., how many individuals are reviewers for international journals, how many are part of public committees, how many provide expertise to Court, etc.;*
- 10. Include in the syllabus a course on Cloud Computing;*
- 11. Teaching of the entire program in English language is highly recommended, to enhance the possibilities of students to find better-qualified jobs and easily reach the international job market;*
- 12. The career centre should be focused specifically on the faculty rather than being generalised for the entire university;*
- 13. Continue improving the plagiarism detection system and update it with artificial intelligence (AI) technologies;*
- 14. Integrating a psychological counseling service and actively promoting the importance of mental health awareness;*
- 15. Consider the possibility of introducing the number of citations (as a proxy for impact) in the metrics for the performance evaluation of academic staff;*
- 16. Revise administrative procedures to ease the approval of research contracts with Industry, thus benefiting the academic staff and the Institution;*
- 17. Renovate laboratory instrumentation.*

In conclusion, the Expert Team considers that the MSc programme in Information and Communication Technologies offered by the Faculty of Electrical and Computer Engineering of the University of Prishtina “Hasan Prishtina” is **substantially compliant** with the standards included in the KAA Accreditation Manual and, therefore, recommends to accredit the above study programme for a duration of **three** years with **20** students to be enrolled on the programme.

Expert Team

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