



Republika e Kosovës
Republika Kosova - Republic of Kosovo



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

*University of Prishtina “Hasan Prishtina”
Bachelor of Computer Science*

REACCREDITATION

REPORT OF THE EXPERT TEAM

April 2021, Tallinn/Prishtina



TABLE OF CONTENTS

Contents

TABLE OF CONTENTS	2
1. INTRODUCTION.....	3
1.1. Context	3
1.2. Site visit schedule.....	5
1.3. A brief overview of the institution and program under evaluation	6
2. PROGRAM EVALUATION.....	7
2.1. Mission, objectives and administration	7
2.2. Quality management	9
2.3. Academic staff	12
2.4. Educational process content.....	15
2.5. Students	20
2.6. Research	22
2.7. Infrastructure and resources.....	25
3. OVERALL EVALUATION AND RECOMMENDATION OF THE ET	27



Republika e Kosovës
Republika Kosova - Republic of Kosovo



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

1. INTRODUCTION

1.1. Context

Date of site visit: 8.04.2021

Expert Team (ET) members:

- Prof. Dr. Peeter Normak – Tallinn University, EE

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)*
- *CVs of the academic staff*
- *Syllabi of the subjects*
- *The Manual for External Evaluation of Higher Education Institutions*
- *Accreditation Manual*



Requested documents:

1. *Strategic Development Plan of FMNS*
2. *Provide the latest survey data collected from stakeholders (students, academic staff, graduates and employers)*
3. *Minutes of the last two meetings of the Quality Assurance and Evaluation Commission*
4. *The latest evaluation report of the study program (an intrinsic document, not of the previous accreditation)*
5. *Minutes on two last meetings of FMNS Advisory Body*
6. *Regulation on the Advisory Board of FMNS*
7. *Statute of FMNS*
8. *Any other relevant documents of FMNS*

Received documents:

1. *Code of Ethics for the Academic Staff of the University of Prishtina "Hasan Prishtina" (in Albanian language)*
2. *Regulation of the Institute of Mathematics, Statistics and Computer Science (in Albanian language from 23.12.2013)*
3. *Strategic Plan of UP for 2020-2022*
4. *Statute of the UP*
5. *Regulation on Establishment and Functioning Principles of the Advisory Board of Academic Units at the University of Prishtina "Hasan Prishtina"*
6. *FMNS Development Plan for 2010-2015*
7. *Decision of the Advisory Board dated 1.04.2021 (in Albanian language)*
8. *Report on evaluation from the Central Commission for Quality Assurance for the study program of Faculty of Mechanical Engineering: Engineering design and vehicles (no date)*
9. *Minutes from the meeting with the Commission for Quality Assurance (no date)*
10. *Summaries of student feedback on subjects and teaching.*

Criteria used for program evaluation:

- *Standards and performance indicators for external quality assurance (Re/accreditation of bachelor and masters study programs) set in the Accreditation Manual.*



1.2. Site visit schedule

- 09.00 – 09.40** Meeting with the management of the faculty where the programme is integrated – Joint session
- Prof. Dr. Idriz Vehapi (Dean)
 - Prof.Asoc.Dr. Avni Berisha (Vice-Dean for Teaching)
 - Prof.Ass. Dr. Kajtaz Bllaca (Vice-Dean for Finance)
 - Prof.Asoc.Dr. Sefer Avdija (Vice-Dean for Science and QA)
- 09.45 – 10:30** Meeting with quality assurance representatives and administrative staff - Joint session
- Dr. Ilir Mazreku (FSHMN)
 - Besnik Loxha (UP)
 - Artan Alidema (FSHMN network administrator)
- 10:35 – 11.35** Meeting with the heads of the study programme
- Prof. Dr.Faton Berisha
 - Ass.Prof. Dr. Ermir Rugova
 - Ass. Prof. Dr. Armend Shabani
- 11:35 – 12:10** Lunch break
- 12.10 – 12:50** Meeting with teaching staff
- Dr. Sc. Muhib Lohaj
 - Dr. Sc. Bujar Fejzullahu
 - Dr. sc Eliot Bytyçi
 - Msc. Korab Rrmoku
- 12.55 – 13.40** Meeting with students
- Donat Gosalci donat.gosalci@student.uni-pr.edu
 - Bardh Mustafa bardh.mustafa@student.uni-pr.edu
 - Erlisa Lokaj erlisa.lokaj@student.uni-pr.edu
 - Albin Hoxha Albin.hoxha1@student.uni-pr.edu
 - Blend Sadikaj blend.sadikaj@student.uni-pr.edu
 - Bora Ballanca bora.ballanca@student.uni-pr.edu



- 13.45 – 14.25 Meeting with graduates
- Erona Vrapcani, erona.vrapcani@gmail.com
 - Lum Dermaku, lum.dermaku@studentet.uni-pr.edu
 - Auolan Shabani, aulonashabani@gmail.com
- 14.30 – 15:10 Meeting with employers of graduates
- Fesal Baxhaku, fesal.baxhaku@tim-solutions.de (Tim solutions)
 - Arten Avdiu ose Agon Kabashi, arten.avdiu@raiffeisen-kosovo.com (Raiffeisen Bank)
 - Elona Dika, e.dika@celonis.com (Celonis)
 - Arben Ymeraga, Arbeny@melita-partners.com (Melita and Partners)
- 15.10 – 15.20 Internal meeting of KAA staff and experts – Joint session
- 15:20 – 15:30 Closing meeting with the management of the faculty and program

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

Faculty of Mathematics and Natural Sciences (hereinafter the *Faculty* or FMNS) was established in 1971. However, mathematics and natural sciences are taught in Prishtina University already from 1960, initially in the Faculty of Philosophy. The 3+2+3 scheme of study programs was implemented in 2001.

The Faculty has currently five departments: Chemistry, Mathematics, Physics, Biology, Geography.

The Faculty awards BA, MA, BSc, MSc and PhD degrees. Bachelor of Computer Science is taught by the Department of Mathematics. Other programs of the Department are: 1) *Mathematics* bachelor program, 2) *Financial Mathematics in Banks and Insurance* bachelor program, 3) *Mathematics* master program.

The Faculty has defined its mission in the FMNS Development Plan for 2010-2015 as “to provide education for students at three levels - bachelor's, Master's and doctorate - to lead scientific research and to make a contribution to society, including to the economy and culture”. The Faculty does not currently have a development plan.



There are around 2100 students currently enrolled in FMNS's Bachelor programs and about 230 in its Master programs. There were (16.04.2021) 273 students on the Computer Science bachelor program.

It is pertinent to note here that the self-assessment report submitted by the university lacked concrete information, so more information than usual had to be obtained from other sources. Therefore, it seems that there were no guidelines for composing high quality self-evaluation reports or, if guidelines were available, they were simply not followed. Another major difficulty was the fact that the self-assessment report was not structured according to standards, with the exception of quality management standards. The third major problem was that the self-assessment report was prepared 2 years ago. Therefore, a significant part of the self-assessment report was outdated and did not reflect the latest situation.

The interviews were conducted via Google Meet. Unfortunately, the quality of the broadcast was extremely poor, especially if more people attended the interview: since only a computer microphone was used, the voices of far-off participants were almost inaudible. Another problem was that two out of three alumni had graduated six years ago, when an earlier version of the study program was in place, and therefore had no experience with some aspects of the current study program. Likewise, all six students who participated in the discussion were from their first and second year of study, who had little to say about the second half of their three years of study.

2. PROGRAM EVALUATION

2.1. Mission, objectives and administration

1.1. The Faculty's mission statement does not specify the areas developed in the Faculty. Therefore, it is not possible to say that the mission of the study program is not in compliance with the mission statement of the Faculty.

1.2. The National Qualifications Framework and the Framework for Qualifications of the European Higher Education are not mentioned in the SER. At the meeting with the



employers, they had several suggestions about the study program and its implementation. They also expressed the opinion that the university should take a greater initiative in developing cooperation with companies.

- 1.3. The study program has 9 learning outcomes. During the meeting with staff members, they mentioned the following overarching concepts of the study program and its implementation: orientation towards the development of independent learning skills, development of soft skills in addition to professional skills, incorporating of research in teaching (mainly by reviewing on various topics), etc. Therefore, it can be said that the study program has an overarching didactic and research concept.
- 1.4. There are regulations dealing with recurring procedural or academic issues: the *Statute of UP, Regulation for Undergraduate Studies – Bachelor, Regulation for disciplinary procedures, Regulation on quality assurance, Regulation on academic mobility* etc. The documents are publicly available on the new university website. However, these documents are in a format that does not support text search.
- 1.5. The university has adopted principles of ethical conduct for academic staff only, according to 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.
- 1.6. Approximately half of the university documents that regulates the studies date from 2019 or 2020. Some of the remaining documents (such as the *University Statute*) were those that do not need to be amended frequently. Some documents (for example the templates of questionnaires) did not contain the date of their approval. The competence to amend most of these documents lies with the central bodies of the university, not the Faculty.

Standard	Compliance	
	Yes	No
<i>Standard 1.1.</i> The study program mission is in compliance with the overall mission statement of the institution.	X	
<i>Standard 1.2.</i> Relevant academic and professional advice is considered when defining the intended learning outcomes which are consistent with the National Qualifications Framework and the Framework for Qualifications of the European Higher Education Area.		X



<i>Standard 1.3.</i> The study program has a well-defined overarching didactic and research concept.	X	
<i>Standard 1.4.</i> There are formal policies, guidelines and regulations dealing with recurring procedural or academic issues. These are made publicly available to all staff and students.	X	
<i>Standard 1.5.</i> All staff and students comply with the internal regulations relating to ethical conduct in research, teaching, assessment in all academic and administrative activities.		X
<i>Standard 1.6.</i> All policies, regulations, terms of reference and statements of responsibility relating to the management and delivery of the program are reviewed at least once every two years and amended as required in the light of changing circumstances.	X	

Compliance level: substantially compliant

ET recommendations:

1. *Formulate the mission of the study program based on the efficient division of labour between the universities of Kosovo and the faculties of the University of Pristina.*
2. *Make formal policies, guidelines and regulations dealing with recurring procedural or academic issues available through the university's public web pages in a computer searchable format.*
3. *Develop code of ethical conduct for students and administrative staff, and publish in a separate document or update the existing document for academic staff.*

2.2. Quality management

- 2.1. The university has not introduced a regular self-evaluation of its staff. At the end of the semester, students evaluate the passed subjects electronically through the SEMS system. Since filling in the questionnaires is voluntary, the available data are not representative and therefore no correct conclusions can be drawn from them.
- 2.2. *Regulation on Quality Assurance and Evaluation at the University of Prishtina* is the main document that states the actors, their duties and the quality assurance processes. Each faculty has the Quality Assurance and Evaluation Committee and the Quality Coordinator who “supports academic staff and students within the faculty by ensuring full implementation and understanding of ECTS, supports and monitors the



respective department and study committees during the accreditation/reaccreditation processes” (SER, page 11).

- 2.3. Quality assurance issues belong to the responsibilities of the Vice-Rector for quality assurance (ex-officio). The quality assurance and assessment system, includes two types of evaluation: 1) Internal evaluation and 2) External Evaluation. Quality assurance on the Faculty level belongs to the responsibility of the Quality Coordinator who coordinates the activities of program planning and delivery. The main tools used are: 1) Questionnaire for Academic Staff, 2) Questionnaire for University Administrative and Support Staff, 3) Bachelor Level Students’ Questionnaire. Students evaluate the quality of teaching at the end of semester. Additionally, student passing rate is used as an indicator to assess the quality of both the study programme and the teacher.
- 2.4. Quality assurance focuses on the quality of the subjects. The questionnaires referred to in section 2.3 do not address the quality of the study program as a whole. Nor were other instruments presented to ET that would address issues of the quality of the study program as a whole, such as learning outcomes and their coverage, the relationship between theoretical and practical learning, links between subjects, etc.
- 2.5. As the standards 2.4 and 2.6 are clearly not met (as well as some standards in other sections), the quality assurance process does not ensure compliance of the study program with all standards. The very low quality of the self-assessment report is also a feature of a non-functioning quality system.
- 2.6. No regular feedback from graduates and employers on the study program is collected. There are developed questionnaires for graduates and labor organizations, but these cover the general issues of studies and the competences of graduates, respectively. As was explained to the ET, there is mostly sporadic communication on the study program with the graduates and employers. At the meeting with employers, they made several proposals for improvement of the study program, which also confirms the understanding that the views of employers have not been sufficiently taken into account in the development of the study program. Moreover, the ET was not able to find results of evaluations on the public web of the university.
- 2.7. The document *Regulation on Quality Assurance and Evaluation at the University of Prishtina* states that the data obtained during the internal evaluation are to be used for the further development of study programs. However, no statistical data were provided on the workload of students and the employment of graduates. The fact that the number of graduates dropped from 69 to 28 between 2016 and 2018 points to serious challenges of sustainability of the study program. Also, no analysis was given of the reasons for such a sharp decline.



- 2.8. Again, the document *Regulation on Quality Assurance and Evaluation at the University of Prishtina* sets out the requirement for periodicity of study program quality analysis. Enforcing this requirement is a task of the Office for Academic Development at university level and Quality Assurance and Evaluation Committee at the Faculty level.
- 2.9. The fact that big part of the latest versions of the documents came into force in the last two years shows that quality assurance arrangements for the study program are regularly evaluated and improved.

Standard	Compliance	
	Yes	No
<i>Standard 2.1.</i> All staff participate in self-evaluations and cooperate with reporting and improvement processes in their sphere of activity.		X
<i>Standard 2.2.</i> Evaluation processes and planning for improvement are integrated into normal planning processes.	X	
<i>Standard 2.3.</i> Quality assurance processes deal with all aspects of program planning and delivery, including services and resources provided by other parts of the institution.	X	
<i>Standard 2.4.</i> Quality evaluations provide an overview of quality issues for the overall program as well as of different components within it; the evaluations consider inputs, processes and outputs, with particular attention given to learning outcomes for students.		X
<i>Standard 2.5.</i> Quality assurance processes ensure both that required standards are met and that there is continuing improvement in performance.		X
<i>Standard 2.6.</i> Survey data is being collected from students, graduates and employers; the results of these evaluations are made publicly available.		X
<i>Standard 2.7.</i> Results of the internal quality assurance system are taken into account for further development of the study program. This includes evaluation results, investigation of the student workload, academic success and employment of graduates.		X
<i>Standard 2.8.</i> The institution ensures that reports on the overall quality of the program are prepared periodically (e.g. every three years) for consideration within the institution indicating its strengths and weaknesses.	X	
<i>Standard 2.9.</i> The quality assurance arrangements for the program are themselves regularly evaluated and improved.	X	

Compliance level: partly compliant



ET recommendations:

1. *Introduce a system of regular self-evaluation and personal development of the academic staff.*
2. *Develop and implement measures for a comprehensive quality analysis of the study program.*
3. *Develop and implement a system for receiving systematic feedback on the study program from alumni and employers.*
4. *Conduct a thorough analysis of the graduate reduction and plan corrective actions based on its results.*

2.3. Academic staff

- 3.1. University of Prishtina as a public university follows strictly all regulations concerning employment. The selection and promotion of teaching staff is conducted according to the articles no. 171, 175, 176 and 177 of the *Statute of UP* as well as according to the following regulations: *Regulation on Selection Procedures for Appointment, Reappointment and Promotion of Academic Staff* and *Regulation on Selection Procedures for Part-time Staff*. The publication of position openings by UP is usually done twice a year. Requests for new academic positions are submitted by the respective departments to the Faculty council that makes the decision on opening the position. Personal data of academic persons are presented in the SER in tabular form. The courses taught are listed in another table.
- 3.2. Legal requirements set for teaching staff are met: all teachers belong to the regular staff and are elected by open competition.
- 3.3. The formal requirements concerning employment of academic staff by other institutions are met – all full-time teachers are indicated in their publications University of Prishtina as their only employer.
- 3.4. All teachers belong to the regular staff, and consequently, they cover all courses.
- 3.5. There are 12 regular staff (out of 15) on the study program who hold a PhD degree. Although the majority of teachers are listed among the teachers of two mathematics study programs as well, the total amount of staff with a PhD is sufficient for all study programs.



- 3.6. The university has established the Center for Teaching and Excellence that organises training of teaching staff. Experienced professors are used as trainers of younger colleagues. More recently training on enhancing teaching and assessment methods, creating syllabuses and writing learning outcomes were organized by international experts; some teachers took part on an international project DRIVE. There are six regular meetings during each year where experienced teaching staff present their experience in teaching and share relevant documents and materials. Newly employed teaching staff are obligated to take two courses on improvement of teaching methods. Every teacher has to attend at least two trainings/workshops between each promotion or before signing a new contract. However, the university does not have a teacher training strategy and corresponding plan, as well as a database of training completed by teachers.
- 3.7. The availability of teachers to students for consultations is different: according to the explanations of the students, while the majority of teachers answer the students' questions promptly, some answer with a considerable delay or do not even answer at all.
- 3.8. Evaluation of the teaching staff is administered by the Rectorate and is done at the end of each semester through the questionnaires posted on the SEMS (Electronic student management system) platform. The results of the academic staff evaluation are taken into account for promotion of the academic staff and renewal of contracts. The performance of each professor is measured based on the University regulation for staff promotions. However, the number of students that fill in the questionnaires is very low; there are no questionnaires developed for peer and superiors' evaluations.
- 3.9. The *Regulation on Quality Assurance and Evaluation at the University of Prishtina* does not contain clauses on teaching strategies or on quality of learning materials. On the other hand, several tasks on the development of teaching methods are in the Strategic Plan for 2020-2022 of the university.
- 3.10. There are no retired full-time teachers – the average age of full-time teaching staff is about 48 years.

Standard	Compliance	
	Yes	No
<i>Standard 3.1.</i> Candidates for employment are provided with full position descriptions and conditions of employment. To be presented in tabular form data about full time (FT) and part time (PT) academic/ artistic staff, such as: name, qualification, academic title, duration of official (valid) contract, workload	X	



for teaching, exams, consulting, administrative activities, research, etc. for the study program under evaluation.		
<i>Standard 3.2.</i> The teaching staff must comply with the legal requirements concerning the occupation of teaching positions included in the Administrative instruction on Accreditation.	X	
<i>Standard 3.3.</i> Academic staff do not cover, within an academic year, more than two teaching positions (one full-time, one part-time), regardless of the educational institution where they carry out their activity.	X	
<i>Standard 3.4.</i> At least 50% of the academic staff in the study program are full time employees, and account for at least 50% of the classes of the study program.	X	
<i>Standard 3.5.</i> For each student group (defined by the statute of the institution) and for every 60 ECTS credits in the study program, the institution has employed at least one full time staff with PhD title or equivalent title in the case of artistic/applied science institutions.	X	
<i>Standard 3.6.</i> Opportunities are provided for additional professional development of teaching staff, with special assistance given to any who are facing difficulties.	X	
<i>Standard 3.7.</i> The responsibilities of all teaching staff, especially full-time, include the engagement in the academic community, availability for consultations with students and community service.	X	X
<i>Standard 3.8.</i> Academic staff evaluation is conducted regularly at least through self-evaluation, students, peer and superiors' evaluations, and occur on a formal basis at least once each year. The results of the evaluation are made publicly available.		X
<i>Standard 3.9.</i> Strategies for quality enhancement include improving the teaching strategies and quality of learning materials.	X	
<i>Standard 3.10.</i> Teachers retired at age limit or for other reasons lose the status of full-time teachers and are considered part-time teachers.	X	

Compliance level: substantially compliant

ET recommendations:

1. *Develop and implement regular measures for assessment and support of academic staff, including annual personal development interviews with the superior.*



2.4. Educational process content

- 4.1. The study program has strong focus on mathematics – the study program has 9 mandatory and 6 elective courses on mathematics (the total number of mandatory courses is 25, including English I). Therefore, the statement (SER, p. 6) that the study program is organized in five main fields, among which mathematics is not mentioned, is misleading. Equally misleading is the statement that one of these five fields is management: there is no management course in the curriculum, and the word "management" is only mentioned in the descriptions of two ICT courses (Software Engineering and Information Systems). The following conclusions can be drawn from the submitted documents and conversations with lecturers, students and employers of alumni:
- 4.1.1. The large number of mandatory mathematics courses does not allow to cover by compulsory courses all important knowledge areas that computer science graduates are assumed to know. For example, *Artificial Intelligence* is an elective course. Moreover, some basic theoretical concepts such as finite state machines, regular expressions, formal languages and grammars seem not to be discussed in the study program.
 - 4.1.2. The study program has a conventional structure, consisting of a collection of individual relatively weakly related subjects. For those who complete this type of study program, to have the skills to conduct a **full development cycle** - from requirements definition and analysis to testing a working prototype -, the study program must contain a mandatory project design and implementation practice. NB! The possible completion of small projects in different subjects does not sufficiently develop such skills.
 - 4.1.3. The course descriptions (syllabi) are detailed enough, but nevertheless it is sometimes not clear how all the learning outcomes of the study program will be ensured. For example:
 - 4.1.3.1. Learning outcome: “Understand professional, ethical, legal, security and social issues and responsibilities”. On the other hand, the words “ethics” and “legal” are not mentioned in any course description.
 - 4.1.3.2. Learning outcome: “Effectively function **within teams** in order to reach a common goal”. According to the course descriptions, teams are formed in two elective courses only: *Programming for Mobile Devices* and *Game Development*.
 - 4.1.3.3. Learning outcomes “Design, implement and evaluate a system, process or computer aided program in order to fulfil the requirements



within realistic limits” and “Apply techniques, skills and current tools necessary for practice in the field”. On the other hand, the study program does not contain a project nor internship.

- 4.1.4. The set of math subjects does not best serve the achievement of study program's learning objectives, especially in some computational mathematics topics, including mathematical modeling. In interviews with students and alumni, two issues were repeatedly mentioned in relation to mathematics subjects: 1) the link between mathematics and IT subjects is weak and 2) while some important topics related with the field of IT are under-represented (e.g. statistical modeling), duplication was mentioned for some other topics (e.g. linear algebra). Among other things, this shows that the teachers do not sufficiently coordinate between themselves the content of the subjects. Mathematics subjects were never mentioned as the subjects most liked by students and graduates. Nevertheless, students and graduates agreed on the importance of mathematics and, in general, were not against the relatively large share of math courses in the study program, but were not satisfied with the content of math courses.
- 4.1.5. Employers of graduates mentioned that they expect from graduates more problem-solving as well as algorithmic and design thinking skills, and that the skills of using collaboration tools are in fact missing. The ability to write a quality code was also identified as a problem. However, an additional aspect should be taken into account here: the employers of graduates expressed the opinion that the exercises should as much as possible have a real life/industry related character.
- 4.1.6. Some recommendations from 2016 accreditation were not implemented. The most important recommendation was to include a practical work – a project – into the study program. The reason for not including “it is impossible to ensure proper functioning of a credit earning practical work” cannot be taken seriously. The need for a practical project was especially emphasized by the graduates.
- 4.2. An analysis showing the compliance of the study program with the National Qualifications Framework and the Framework for Qualifications of the European Higher Education Area was not provided. However, the set of learning outcomes of the study program indicates that the study program is compliant to these frameworks.
- 4.3. The study program has 9 learning outcomes. Some discrepancies between learning outcomes and course descriptions have been described in previous sections.



- 4.4. The syllabi contain all the necessary components and were submitted in electronic form. They are in general detailed enough to get an adequate understanding on the content and other aspects of the subjects.
- 4.5. The language in which the study program will be offered is Albanian.
- 4.6. Students and alumni did not complain about relationships with teachers.
- 4.7. Although the course descriptions did not describe the teaching strategies and methods (types of classes – lectures, exercises, laboratory work, exam etc – were listed in section Teaching Methods), the teachers mentioned during meetings some concrete practices to motivate students to focus on their studies and on the development of learning skills.
- 4.8. With regard to assessment, students and alumni mentioned the following problems:
 - 1) Requirements for exams in mathematics were higher than those for computer science (that is, exams in mathematics were more difficult than in computer science) and
 - 2) Transparency of grades (students did not know the components of the grade).
- 4.9. The grading system that is used in all Balkan countries is used. The grades are 5, 6, 7, 8, 9, 10 where 5 marks failing and 6-10 are positive. The passing level is 50% as widely used in Europe.
- 4.10. Students who are not satisfied with the evaluation of their work have the right to submit a written complaint to the Dean. The procedures are described in the *Statute of the University*.
- 4.11. As already mentioned in section 4.1.3.3, the study program does not contain a project nor internship. The need to have more use cases and projects in real industry setup was particularly strongly stressed by alumni. Students wanted more programming courses (there is only one mandatory course in programming for the first three semesters).
- 4.12. The meeting with the representatives of the companies revealed that they do not have any formal relations to the Faculty. According to them, ties with the university have rather weakened in recent years. For example, some employers used to teach at the university in the past, but recently this has become impossible.

Standard	Compliance	
	Yes	No
<i>Standard 4.1.</i> The study program is modelled on qualification objectives. These include subject-related and interdisciplinary aspects as well as the acquisition of disciplinary, methodological and generic skills and competencies. The aspects		X



refer especially to academic or artistic competencies, to the capability of taking up adequate employment, contributing to the civil society and of developing the students' personality.		
<i>Standard 4.2.</i> The study program complies with the National Qualifications Framework and the Framework for Qualifications of the European Higher Education Area. The individual components of the program are combined in a way to best achieve the specified qualification objectives and provide for adequate forms of teaching and learning.	X	
<i>Standard 4.3.</i> The disciplines within the curriculum are provided in a logical flow and meet the definition and precise determination of the general and specific competencies, as well as the compatibility with the study programs and curricula delivered in the EHEA. To be listed at least 7 learning outcomes for the study program under evaluation.		X
<i>Standard 4.4.</i> The disciplines within the curriculum have analytical syllabuses which comprise at least the following: the discipline's objectives, the basic thematic content, learning outcomes, the distribution of classes, seminars and applicative activities, students' assessment system, the minimal bibliography, etc. The full course description/ syllabuses of each subject/ module should be attached only in electronic form to the self-assessment report for the study program under evaluation.	X	
<i>Standard 4.5.</i> If the language of instruction is other than Albanian, actions are taken to ensure that language skills of both students and academic staff are adequate for instruction in that language when students begin their studies. This may be done through language training prior to the commencement of the program.	n.a.	
<i>Standard 4.6.</i> The student-teacher relationship is a partnership in which each assumes the responsibility of reaching the learning outcomes. Learning outcomes are explained and discussed with students from the perspective of their relevance to the students' development.	X	
<i>Standard 4.7.</i> Teaching strategies are fit for the different types of learning outcomes programs are intended to develop. Strategies of teaching and assessment set out in program and course specifications are followed with flexibility to meet the needs of different groups of students.	X	
<i>Standard 4.8.</i> Student assessment mechanisms are conducted fairly and objectively, are appropriate for the different forms of learning sought and are clearly communicated to students at the beginning of courses.		X
<i>Standard 4.9.</i> Appropriate, valid and reliable mechanisms are used for verifying standards of student achievement. The standard of work required for different	X	



grades is consistent over time, comparable in courses offered within a program, and in comparison with other study programs at highly regarded institutions.		
<i>Standard 4.10.</i> Policies and procedures include actions to be taken in to dealing with situations where standards of student achievement are inadequate or KAA inconsistently assessed.	X	
<i>Standard 4.11.</i> If the study program includes practice stages, the intended student learning outcomes are clearly specified and effective processes are followed to ensure that those learning outcomes and the strategies to develop that learning are understood by students. The practice stages are allocated ETCS credits and the work of the students at the practical training organisations is monitored through activity reports; students during practice stages have assigned tutors among the academic staff in the study program.		X
<i>Standard 4.12.</i> In order to facilitate the practice stages, the higher education institution signs cooperation agreements, contracts or other documents with institutions/organisations/practical training units. <i>*To be inserted the overview of the program (with all areas to be filled out)</i>		X

Compliance level: partly compliant

ET recommendations:

1. *Include IT project and industrial practice (internship) as compulsory subjects in the study program.*
2. *Develop and implement mechanisms of cooperation with companies that will ensure: 1) the availability of a sufficient number of internships in companies and 2) sufficient feedback to the university both on the organization of internships and on the competencies of students.*
3. *Review the content of mathematics courses, in particular with regard to the coherence between subjects and the needs of IT subjects.*
4. *Revise the content and organization of IT subjects in the light of the following aspects: 1) a reasonable ratio between lectures and exercises (currently the ratio is 1:1, regardless of the nature of the subject: more emphasis should be put for development of practical skills and transferable competences), 2) the total workload of students (currently each student has an average of 20 classroom hours per week and in addition an average of 10 hours for independent work, but the total weekly study load should be 40 hours).*



2.5. Students

- 5.1. The admission criteria are stated in the *Statute of the University* as well as in the *Regulation for Undergraduate Studies – Bachelor*. The University Senate issues detailed regulations by which students are admitted.
- 5.2. To enrol on bachelor studies, a student must have a high school diploma, pass the Matura state exam and the entrance exam (in mathematics) organized by the Faculty. The University Senate determines the number of candidates to be accepted, considering the proposed number by the Faculty Council for each study program.
- 5.3. According to the planned classes for the study program, one group of students consists of maximum 60 students for lectures (although staff members had an opinion that the yearly intake should be at least 90), up to 30 for exercises (2 subgroups) and up to 20 for laboratory work (3 subgroups).
- 5.4. The ET was not provided with any document specifying procedures and timelines for student feedback. This issue was also not discussed in the SER. Questions about feedback from teachers are not included in the student questionnaire, so the university does not have adequate knowledge of student satisfaction with the feedback they get from the teachers.
- 5.5. The university has established an Electronic Student Management System (SEMS). SEMS is an electronic platform to which students have individual access. This platform records individual student achievements and contains all materials and information needed to pass the courses. All course syllabi are also published on SEMS. The Faculty has a database where they keep records of all student grades and students can get a printout of their grades if they need it.
- 5.6. Assessment of students is done through exams, colloquiums, seminars, laboratory exercises and presentations of the practical projects. If assessment consists of two parts – a written part and an oral part – then the grade is calculated based on the results of both parts. The student has the right to apply for the revision of the grade, by submission of a written complaint to the Dean. In this case, the student takes the exam before the commission. All exams are held on the announced exam dates in January, June and September. The Senate of the UP (on the proposal of the Study Committee and the Faculty Councils) may decide to announce additional terms for exams if it considers that this contributes to the progress of the study process.
- 5.7. The Faculty collects and analyses the pass rates and grades of students of the courses. The results of these analyses are forwarded to the dean who takes further measures if necessary.



- 5.8. The university has not implemented any plagiarism detection software, and checking originality of students' written texts is not regulated.
- 5.9. The rights (including appeal procedures) and obligations of students and issues of non-academic conduct are stated in the *Statute of the University* which is a publicly available document.
- 5.10. The students' transfer between higher education institutions, faculties and study programs is regulated in the *Statute of the University* and in the *Regulation for Undergraduate Studies - Bachelor*. All students' rights and obligations are made publicly available.
- 5.11. Consultations are written in just very few course syllabi as one of the forms of teaching methodology. Student feedback surveys show that there have not been enough consultations in a number of subjects.

Standard	Compliance	
	Yes	No
<i>Standard 5.1.</i> There is a clear and formally adopted admission procedure at institutional level that the study program respects when organising students' recruitment. Admission requirements are consistently and fairly applied for all students.	X	
<i>Standard 5.2.</i> All students enrolled in the study program possess a high school graduation diploma or other equivalent document of study, according to MEST requirements.	X	
Standard 5.3. The study groups are dimensioned so as to ensure an effective and interactive teaching and learning process.	X	
<i>Standard 5.4.</i> Feedback to students on their performance and results of assessments is given promptly and accompanied by mechanisms for assistance if needed.		X
<i>Standard 5.5.</i> The results obtained by the students throughout the study cycles are certified by the academic record.	X	
<i>Standard 5.6.</i> Flexible treatment of students in special situations is ensured with respect to deadlines and formal requirements in the program and to all examinations.	X	
<i>Standard 5.7.</i> Records of student completion rates are kept for all courses and for the program as a whole and included among quality indicators.	X	
<i>Standard 5.8.</i> Effective procedures are being used to ensure that work submitted by students is original.		X



<i>Standard 5.9.</i> Students' rights and obligations are made publicly available, promoted to all those concerned and enforced equitably; these will include the right to academic appeals.	X	
<i>Standard 5.10.</i> The students' transfer between higher education institutions, faculties and study programs is clearly regulated in formal internal documents.	X	
<i>Standard 5.11.</i> Academic staff is available at sufficient scheduled times for consultation and advice to students. Adequate tutorial assistance is provided to ensure understanding and ability to apply learning.		X

Compliance level: substantially compliant.

ET recommendations:

1. *Introduce a plagiarism detection system in the university (or in the Faculty).*
2. *Stipulate in the university regulations the obligations of lecturers regarding giving feedback to students.*

2.6. Research

- 6.1. One of the aims of the study program is for students to (SER, page 6) "Use and apply new technologies from the field of computer science". However, no learning outcome of the study program deal with research competences. There is no research methods/methodology course in the study program and research methods are not mentioned in the description of any subject. There are also no article concerning research in *Regulation for Undergraduate Studies - Bachelor*. There is no separate budget line for research support. Interviews with representatives of the quality assurance showed that only about 1% of the budget is allocated for research activities.
- 6.2. Expectations for teaching staff involvement in research and scholarly activities and performance in relation to these expectations are specified in the work contract, in the *Statute of the University* and in the *Regulation on the Selection Procedures Related to the Appointment, Reappointment and Promotion of the Academic Staff at the University of Prishtina "Hasan Prishtina"*.
- 6.3. Research activities are determined indirectly: the document *Regulation on Financing Research – Scientific, Artistic and sports Activities at the University of Prishtina* lists the activities that are financially supported.



- 6.4. About half of the academic staff does research in mathematical analysis. Out of 15 teachers listed in the SER (two of them are assigned no course on the study program), three are doing research in computer science (focus – data mining). As about 40% of the courses in the study program are in mathematics, then the research of the academic staff does in the majority of cases harmonize with the topics the teachers teach.
- 6.5. The research of academic staff is internationally visible (for example, in *Google Scholar, GS*). All teachers have a positive GS h-index, and the publications of some of teachers have relatively high citation scores.
- 6.6. Research is basically validated by scientific publications. Technological transfer is not regulated and not supported by the university. This is not facilitated by the salary system either, as salaries are unified and do not depend on cooperation with companies. The employers of graduates mentioned that private colleges are sometimes even more active in cooperating with companies and transferring technology.
- 6.7. According to the SER, some teachers have not published at least an average of one scientific/applied research publication per year for the past three years.
- 6.8. The academic staff within the Faculty publishes papers under the name of the University of Prishtina.
- 6.9. No evidences were provided that academic staff are encouraged to include in their teaching information about their research and scholarly activities that are relevant to courses they teach, together with other significant research developments in the field. On the other hand, as the research of the teachers harmonizes quite well with the topics they teach, the potential is high to use research results in teaching.
- 6.10. The university has not yet established intellectual property ownership policies or regulations, although “The development of policy for the protection of the intellectual property of the University and of its commercial utilization” is stated in the *Statute of the University* as one of the responsibilities of the Senate.
- 6.11. Although the study program does not deal with research methods and methodology as explained in section 6.1 (research methods and methodology are not mentioned in any module description), the staff explained that research is incorporated in teaching and students are encouraged to read and review articles on different topics.

Standard	Compliance	
	Yes	No
<i>Standard 6.1.</i> The study program has defined scientific/applied research objectives (on its own or as part of a research centre or interdisciplinary program), which are also reflected in the research development plan of the		X



institution; sufficient financial, logistic and human resources are allocated for achieving the proposed research objectives.		
<i>Standard 6.2.</i> Expectations for teaching staff involvement in research and scholarly activities are clearly specified, and performance in relation to these expectations is considered in staff evaluation and promotion criteria.	X	
<i>Standard 6.3.</i> Clear policies are established for defining what is recognized as research, consistent with international standards and established norms in the field of study of the program.	X	
<i>Standard 6.4.</i> The academic staff has a proven track record of research results on the same topics as their teaching activity.	X	
<i>Standard 6.5.</i> The academic and research staff publish their work in speciality magazines or publishing houses, scientific/applied/artistic products are presented at conferences, sessions, symposiums, seminars etc. and contracts, expertise, consultancy, conventions, etc. are provided to partners inside the country and/or abroad.	X	
<i>Standard 6.6.</i> Research is validated through: scientific and applied research publications, artistic products, technological transfer through consultancy centres, scientific parks and other structures for validation.		X
<i>Standard 6.7.</i> Each academic staff member and researcher has produced at least an average of one scientific/applied research publication or artistic outcome/product per year for the past three years.		X
<i>Standard 6.8.</i> Academic and research staff publish under the name of the institution in Kosovo they are affiliated to as full-time staff.	X	
<i>Standard 6.9/6.8.</i> Academic staff are encouraged to include in their teaching information about their research and scholarly activities that are relevant to courses they teach, together with other significant research developments in the field.	X	
<i>Standard 6.10.</i> Policies are established for ownership of intellectual property and clear procedures set out for commercialization of ideas developed by staff and students.		X
<i>Standard 6.11.</i> Students are engaged in research projects and other activities.	X	

Compliance level: substantially compliant

ET recommendations:

1. *Update the study program either by adding a subject in research methods and methodology, or adding topics of research methods and methodology to different existing subjects.*



2. *Develop and implement a regulation on technology transfer.*
3. *The university is recommended to establish an intellectual property ownership policy.*

2.7. Infrastructure and resources

- 7.1. In total, the Department of Mathematics has 1388m² at its disposal: four classrooms, three laboratories, library, 11 rooms for teachers and some rooms for administration. Video was provided about the facilities. As the share of computing courses is relatively small, it seems that the Department has enough premises (rooms assigned to other departments can also be used, if necessary). However, students and teachers complained about outdated computers and lack of licenced software. Access of students to the labs is limited, mainly due to lack of assistants. Availability of computer science teachers is still a big problem: more than half (23) of the total number of courses are offered by two teachers – an assistant and an assistant professor.
- 7.2. Financial plan of the Department of Mathematics was provided where expenses for salaries, as well as faculty level operational expenses, and expenses for computers and other equipment are calculated.
- 7.3. As a public institution of higher education, University's financial sustainability is guaranteed by the Mid-Term Expenditure Framework for the next three years. The University is the owner of the space it uses. The university has a central library, and the department has its own library of 60 m².
- 7.4. Considering the number of students, the number and size of teaching classrooms and laboratories seems adequate. At the same time, there is no suitable environment in the public space for students to work outside of class.
- 7.5. The role of the library and library services seems to be underestimated: the SER of 129 pages devotes to the library exactly one sentence. Moreover, this sentence gives absolutely no hint of compliance with Standard 7.5. The ET was not able to find additional information on library services as well. According to the students, a large part of what is in the library is outdated. Teachers complained about poor access to full-text scientific databases.
- 7.6. The infrastructure is not fully adapted to students with special needs.



Standard	Compliance	
	Yes	No
<i>Standard 7.1.</i> The adequate long-term implementation of the study program is ensured in quantitative terms as regards premises, human resources and equipment. At the same time, it is guaranteed that qualitative aspects are also taken into account.		X
<i>Standard 7.2.</i> There is a financial plan at the level of the study program that would demonstrate the sustainability of the study program for the next minimum three years.	X	
<i>Standard 7.3.</i> The higher education institution must demonstrate with adequate documents (property deeds, lease contracts, inventories, invoices etc.) that, for the study program submitted for evaluation it possesses the following, for the next at least three years: a) owned or rented spaces adequate for the educational process; b) owned or rented laboratories, with the adequate equipment for all the compulsory disciplines within the curriculum, wherever the analytical syllabus includes such activities; c) adequate software for the disciplines of study included in the curriculum, with utilisation licence; d) library equipped with reading rooms, group work rooms and its own book stock according to the disciplines included in the curricula.	X	
<i>Standard 7.4.</i> The number of seats in the lecture rooms, seminar rooms and laboratories must be related to the study groups' size (series, groups, subgroups); the applicative activities for the speciality disciplines included in the curricula are carried out in laboratories equipped with IT equipment.	X	
<i>Standard 7.5.</i> The education institution's libraries must ensure, for each of the study programs: a) a number of seats in the reading rooms corresponding to at least 10% of the total number of students in the study program; b) a number of seats in the group work rooms corresponding to at least 10% of the total number of students in the study program; c) their own book stock from Albanian and foreign speciality literature, enough to cover the disciplines within the curricula, out of which at least 50% should represent book titles or speciality courses of recognised publishers, from the last 10 years; d) a book stock within its own library with a sufficient number of books so as to cover the needs of all students in the cycle and year of study the respective discipline is provided for;		X



e) a sufficient number of subscriptions to Albanian and foreign publications and periodicals, according to the stated mission.		
<i>Standard 7.6.</i> The infrastructure and facilities dedicated to the implementation of the program is adapted to students with special needs.		X

Compliance level: partly compliant

ET recommendations:

1. *Since the infrastructure meets only the minimum requirements, opportunities must be found to increase the number of classrooms, seminar rooms and laboratories in order to provide a perspective for development.*
2. *Upgrade laboratory equipment.*
3. *Provide students with better access to labs outside of school hours.*
4. *Ensure that infrastructure requirements are met for students with special needs.*
5. *Plan and implement measures to ensure compliance with the requirements of Standard 7.5.*

3. OVERALL EVALUATION AND RECOMMENDATION OF THE ET

The following recommendations need to be considered in relation to the program accreditation and further development:

1. The general impression is that the main factors hindering development are a number of university-level problems. These are:
 - a. **The use of academic resources at the university is inefficient**, particularly in the field of ICT. It is known that the development of a society is largely determined by the digital solutions used in all its sectors, the so-called digital transformation. It is the same with university education in all subject areas, which requires digital transformation to ensure quality. To achieve excellence in this, academic competence in ICT should be pooled rather than split between different faculties. Thus, instead of each faculty recruiting some ICT lecturers, they should be grouped in one unit (faculty), which also provides ICT training in all other faculties. Such a unit would have the potential to create strong research teams that would be much more competitive in getting international ICT grants. Among other things, the consolidation of the IT academic



staff into one unit will create the prerequisites for the opening of a doctoral program in IT. Given the growing role of the IT sector in the efficient functioning of society, the possibility of doctoral studies in Kosovo would be essential (experience in other countries has shown that in the case of joint study programs between different faculties, responsibilities are scattered and quality assurance is difficult).

- b. In today's information society, economic development, culture, politics and the well-being of members of society are largely based on information. The most important mediation medium for public information about the university is the university website. Public universities should lead by example. However, **the public website of the University of Prishtina is literally a disaster**. The fact that the new website has just being launched is not an excuse for poor quality. The responsibility for the quality of the university website cannot lie with any faculty, but with the top management of the university.
 - c. Several **important areas are not regulated** at the university. For example, 1) The university has not established intellectual property policies and 2) technology transfer (including establishing spin-offs and start-ups) is not regulated. Ensuring academic activities with the necessary resources should be a special focus of university top management; every opportunity should be taken to this end.
2. In order to consolidate academic activities in the field of IT at the university, the relevant priorities and focuses should be set first. For example, if you want to focus on IT areas based on mathematical methods (cryptography, data science and analysis, process optimization, etc.), then it would be expedient to include mathematicians working at the university in the consolidated unit (faculty). IT priorities should take into account development trends in the field (such as those indicated by Gartner) as well as Kosovo's overall strategic development plans. Important is involvement of all major stakeholders, in particular the Kosovo Association of ICT (STIKK).
 3. The development of any field requires resources - the faster the desire to develop, the bigger the need for resources. The IT sector is one of the fastest - if not the fastest - growing areas. Thus, if the university is to keep up with the times so that IT graduates can also apply technologies used in companies, the university (i.e. the academic unit providing IT training) must be provided with the necessary resources. Not only that, resources should also be allocated to a structure that supports learning, including



companies to support research and development cooperation with universities and student internships.

- Regardless of whether the university concentrates ICT competence in one faculty or not, the faculty management is recommended to start negotiations with the management of the Faculty of Electrical and Computer Engineering and with the Faculty of Mechanical Engineering on **mutually beneficial cooperation and sharing of resources** in the field of ICT. The opportunities for cooperation have not yet been sufficiently exploited. Thus, for example, the reason for not addressing ethical issues in Computer Science study program of FMNS was the lack of a lecturer, while the FECE faculty offers the subject “Legal, Ethical and Social Issues in ICT” in their Computer and Software Engineering bachelor program.

Overall compliance:

Standard	Compliance level
1. Mission, objectives and administration	Substantially compliant
2. Quality management	Partly compliant
3. Academic staff	Substantially compliant
4. Educational process content	Partly compliant
5. Students	Substantially compliant
6. Research	Substantially compliant
7. Infrastructure and resources	Partly compliant
Overall compliance	Substantially compliant

In conclusion, the Expert Team considers that the study program Bachelor of Computer Science offered by University of Prishtina is *Substantially compliant* with the standards included in the *KAA Accreditation manual* and, therefore, recommends to *accredit* the study program for a duration of *3 years* with a number of 60 students to be enrolled in the program.

Expert Team

Chair

(Signature)

Peeter Normak

(Print Name)

18.04.2021

(Date)