



Republika e Kosovës  
Republika Kosova - Republic of Kosovo



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

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***UNIVERSITY OF PRISHTINA “HASAN PRISHTINA”  
MATHEMATICS – MASTER***

***REACCREDITATION***

**REPORT OF THE EXPERT TEAM**

*February 2022*



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## 1. INTRODUCTION

### 1.1. Context

**Date of site visit: 21.02.2022**

**Expert Team (ET) members:**

- *Peeter Normak*
- *Laura Palac*

**Coordinators from Kosovo Accreditation Agency (KAA):**

- *Flamur Abazaj, Senior Officer for Monitoring and Evaluation*
- *Arianit Krasniqi, Senior Officer for Accreditation and Evaluation*

**Sources of information for the Report:**

- *The Self-Evaluation Report, Faculty of Mathematics and Natural Sciences (FMNS). Program Mathematics – Master (SER).*
- *Syllabi of the subjects.*
- *CVs of the academic staff.*
- *The draft Strategic Development Plan of FMNS for 2022-2026.*
- *The minutes of the FMNS Advisory Board meetings of 16.04.2021 and 14.02.2022.*
- *Regulation on the Student Academic Mobility in the University of Prishtina “Hasan Prishtina”.*
- *Examples of master theses: 1) Leutrim Klinaku, Grupet lineare të Liut  $SU(2)$  dhe  $SO(3)$ , paraqitja e tyre dhe ndërlidhja me kombinatorikën and 2) Haxhi Dacaj, The Zeroes of Lommel Functions.*
- *Questionnaires for students, graduates and academic staff.*
- *Sample of a final evaluation report (University of Prishtina, Bachelor of Science in Economics, 2020).*
- *Report of the expert team of the 2019 accreditation of the study program.*
- *Regullore për procedurën dhe masat disiplinore për studentët e universitetit të prishtinës.*
- *Additional documents in English retrieved from the web site of the Faculty of Mathematics and Natural Sciences (<https://fshmn.uni-pr.edu/page.aspx?id=1,117>).*



### Criteria used for program evaluation:

- *KAA Accreditation Manual.*
- *The Manual for External Evaluation of Higher Education Institutions.*

### 1.2. Site visit schedule

Time	Meeting	Participants
09:00 – 09:45	Meeting with the management of the faculty where the programme is integrated	Idriz Vehapi Sefer Avdiaj Avni Berisha Kajtaž Bllaca Jeton Hyseni
09:50 – 10:35	Meeting with quality assurance representatives and administrative staff	Ilir Mazreku Besnik Loxha Artan Alidema
10:40 – 11:40	Meeting with the heads of the study programme:	Bujar Fejzullahu Edmond Aliaga
11:40 – 12:25	Lunch break (provided at the evaluation site)	
12:25 – 13:10	Meeting with teaching staff	Faton Berisha Naim Braha Armend Shabani Ramadan Limani Astrit Ferizi
13:15 – 14:00	Meeting with students	Arben Krasniqi Belinda Shabani Erion Hamiti Ilir Berisha Pranvera Bytyqi
14:05 – 14:50	Meeting with graduates	Astrit Vuthaj Leutrim Klinaku
14:55 – 15:40	Meeting with employers of graduates and external stakeholders	Kolegji “UBT”, Prishtinë SHML “Aleksandër Xhuvani”, Podujevë
15:40 – 15:50	Internal meeting of KAA staff and experts	
15:50 – 16:00	Closing meeting with the management of the faculty and program	



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### 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. Master of Mathematics 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) *Computer Science* bachelor 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 development plan for 2022-2026 is currently under development. The mission is formulated in the Draft Strategic Development Plan as “In a rapidly developing world, our study programs provide opportunities to our students to gain fundamental and new knowledge in mathematics and natural sciences: physics, chemistry, biology, geography, ecology and, computers science and to transfer this knowledge at the education, scientific and, professional domains in order to enhance the quality of peoples life”.

There are currently about 400 students enrolled in the FMNS Bachelor’s program and about 50 in the Master’s program in Mathematics.



## 2. PROGRAM EVALUATION

### 2.1. Mission, objectives and administration

- 1.1. The SER states the mission of the study program as enabling “students to acquire basic knowledge and understanding of the results in theoretical mathematics”. This is fully in compliance with the overall mission statement of the Faculty.
- 1.2. The SER claims that the learning outcomes are in line with the *National Qualifications Framework (NCF)* and the *Framework for Qualifications of the European Higher Education Area*. However, no further explanation is given. In fact, the learning outcomes cover competences in mathematics only and do not state some general competences that are listed in the NCF (for details, see section 4.2 in 2.4. *Educational process content*). Excerpts from the minutes of the Advisory Board of the Faculty meetings show that the compliance of the learning outcomes with the qualifications frameworks has not been discussed at these meetings.
- 1.3. The SER does not mention any didactic and research concept of the study program. During the meeting with students, several issues were mentioned: the gap between the bachelor and master programs, insufficient number of practical exercises to consolidate and apply theoretical lectures, lack of usage of mathematical software packages etc.
- 1.4. There are regulations dealing with recurring procedural or academic issues: the *Statute of UP*, *Regulation for Master Scientific Studies*, *Regulation for disciplinary procedures*, *Regulation on quality assurance*, *Regulation on the Student Academic Mobility* etc. These documents are publicly available on the university website.
- 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”*. There are no separate documents about ethical conduct of students and administrative staff. Some aspects of ethical behavior of students are touched in different documents, mainly in the *Regulations on procedure and disciplinary measures for students of the University of Prishtina* (“Regullore për procedurën dhe masat disiplinore për studentët e universitetit të prishtinës”).
- 1.6. Approximately half of the university documents that regulates the studies are adopted or amended during the last three years. 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.	+	
<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.		+
<i>Standard 1.3.</i> The study program has a well-defined overarching didactic and research concept.		+
<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.	+	
<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.		+
<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.	+	

**Compliance level:** Partially compliant

**ET recommendations:**

- 1. Create mechanisms to collect and take into account input from various stakeholders to improve the learning outcomes of the study program.*
- 2. Determine an overarching didactic and research concept of the study program and ensure its implementation.*
- 3. Develop a 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 can evaluate the passed subjects electronically through the SEMS system. Since filling in the questionnaires have been voluntary (the ET was informed that the filling of questionnaires is now mandatory), 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.
- 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) 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. Unfortunately, the SER also did not contain a substantive analysis of the quality of the study program. 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. No person in the university is responsible for the quality of the study program - although heads have been appointed for the study program, their responsibilities are not specified.





- 2.6. No regular feedback from graduates and employers on the study program is collected. Questionnaires have been developed for graduates and work organizations, but they only cover general teaching issues and graduates' competencies, 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 students, graduates and the employer (there was just one representative of the employers of graduates), they made several proposals for improvement of the study program, which also confirms the understanding that the views of stakeholders 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. It is also worrying that students mentioned that they do not take student questionnaires seriously.
- 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 total number of graduates during the last three years was eight points to serious challenges with the sustainability of the study program. Also, no analysis was given of the reasons for such a low number. Again, the fact that students suggested a number of improvements of the study program during the meeting with the ET is clear evidence that the quality assurance system is not functioning properly.
- 2.8. 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. However, there are no comprehensive assessments of study programs other than for the accreditation purposes.
- 2.9. The fact that big part of the latest versions of the documents came into force in the last three 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.		+
<i>Standard 2.2.</i> Evaluation processes and planning for improvement are integrated into normal planning processes.	+	



<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.	+	
<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.		+
<i>Standard 2.5.</i> Quality assurance processes ensure both that required standards are met and that there is continuing improvement in performance.		+
<i>Standard 2.6.</i> Survey data is being collected from students, graduates and employers; the results of these evaluations are made publicly available.		+
<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.		+
<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.	+	
<i>Standard 2.9.</i> The quality assurance arrangements for the program are themselves regularly evaluated and improved.	+	

**Compliance level:** Partially compliant

**ET recommendations:**

- 1. It is recommended to nominate **one** highly qualified academic staff member as a curator/coordinator of the study program who has the full responsibility on the quality of that study program. The curator will then form a permanent council of the study program, including representatives of employers, partners, students, graduates and some key academic staff. The task of the council will be to propose recommendations for further improvements of the study program based on surveys of all stakeholders, international development trends of the academic area and the needs of society. The authority and responsibilities of the curator should be explicitly defined in the university regulations.*
- 2. Introduce a system of regular self-evaluation and personal development of the academic staff.*



3. *Develop and implement measures for a comprehensive quality analysis of the study program.*
4. *Develop and implement a system for receiving systematic feedback on the study program from alumni and employers.*
5. *Conduct a thorough analysis of the reasons of the low number of admitted students and graduates 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 but one are full-time employees 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. The vast majority of teachers belong to the regular staff, and consequently, they cover the vast majority of the courses.
- 3.5. There are 16 regular staff (out of 19) on the study program who hold a PhD degree. Although the majority of teachers are listed among the teachers of two mathematics and computer science bachelor 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. 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 responsibilities of teaching staff are defined in the Statute of the university and other documents. These include among other responsibilities the engagement in the academic community, availability for consultations with students and community service.
- 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. There are also no regular development interviews with the staff.
- 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. Development of learning materials is also not mentioned in the Draft of the Strategic Development Plan for 2022-2026. It is pertinent to note here that the students who met with ET mentioned the lack of teaching materials in Albanian language as one of the problems related to their studies.
- 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 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.	+	
<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.	+	
<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.	+	
<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.	+	
<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.	+	
<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.	+	
<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.		+
<i>Standard 3.9.</i> Strategies for quality enhancement include improving the teaching strategies and quality of learning materials.		+
<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.	+	

**Compliance level:** Substantially compliant

**ET recommendations:**

- Develop and implement regular measures for assessment and support of academic staff, including annual personal development interviews of the staff – both academic and non-academic – with the superior. To this end, impose an annual obligation on employees to draw up a self-assessment report for the previous year and objectives for personal development for the following year.*



2. *The development of Albanian language teaching materials should also be planned in the Faculty's Strategic Development Plan for 2022-2026.*

## 2.4. Educational process content

- 4.1. The study program has 12 mandatory and 11 elective courses from which each student should select 5. All courses are the size of 6 ECTS except Seminar (5 ECTS) and Diploma thesis (25 ECTS). The expected learning outcomes state that “By the end of the study program, students will be able solve more complex problems from the algebra, analysis, geometry and topology”. However, the division of courses between these four areas is quite uneven (for example, only one course in algebra). The following conclusions can be drawn from the submitted documents and conversations with lecturers, students and employers of alumni:
  - 4.1.1. The Theoretical Mathematics master program of the University of Zagreb is taken as example in composing the study program. However, there are four master programs in mathematics in the University of Zagreb (Theoretical Mathematics, Applied Mathematics, Mathematical Statistics, Financial and Business Mathematics) while the assessed study program is the only master’s program in mathematics in all of Kosovo. The question therefore arises as to the extent to which this study program can meet Kosovo's needs for mathematicians holding a master's degree.
  - 4.1.2. Due to the fact that the study program bases on the example of the Theoretical Mathematics master program, the share of applied mathematics is extremely small. Only one course (*Introduction to approximation theory*) can be considered among the mandatory belonging to this category, and even that at only of a basic level. Mathematical modeling is completely missing among the mandatory subjects – only regression models are mentioned in the course description of Mathematical Statistics (which is an elective course). Therefore, the question arises whether the study program allows to successfully achieve the learning outcomes “Analyze strategies (techniques, methods) to solve a problem from everyday life” and “Use the knowledge gained from this program to model and solve problems from various fields”.
  - 4.1.3. According to the syllabi and to the tables on pages 21 and 22 of SER, the division of classes between lectures and exercises is extremely unbalanced: out of 21 subjects, 18 have weekly 3 hours lectures and 0 hours exercises!



This contradicts to the statement “The ratio between theoretical part and exercises is approximately 2:1” (SER, page 7) and to the course descriptions where ratio between theoretical part and exercises is also claimed to be 2:1. The explanations of the teaching staff and students were different in this respect: while the teachers explained that exercises are conducted in a sufficient amount during the lectures, the students were not satisfied with the small share of the exercises.

- 4.1.4. The use of technological tools is practically nonexistent – use of computers is mentioned as concretization tools only once (the course *Numerical Methods for Differential Equations*). Even *Mathematical Statistics* and *Introduction to Approximation Theory* are conducted without any computing tools! Here, too, the explanations of the teaching staff and students were different: according to the teaching staff, mathematical software packages are used, according to the students – not.
- 4.1.5. The study program does not contain an internship (although it is in the corresponding study program of the University of Zagreb). It is pertinent to note here that the ET also proposed to include internships in the study program in their 2019 evaluation report.
- 4.1.6. The students and graduates expressed their wish to have a course in academic writing. There was also a suggestion to use more formative assessment.
- 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. Some of the competencies described in the *National Qualifications Framework* are not set out as learning outcomes in the study program and their achievement is problematic, for example, “planning and carrying out an important research and development project”, “managing professional teams, contributing to the development of knowledge and practice and reviewing their performance” and “addressing complex ethical and professional issues and making decisions on issues that are not addressed by current professional codes or practices.”. More specifically, project or team work and discussion of ethical issues is not mentioned in the description of the study program.
- 4.3. The study program has seven learning outcomes. Some general competences that are not explicitly mentioned in the SER have been described in the previous sections. Students mentioned some problems concerning the logical flow of the courses. For



example, some topology concepts were used in the first semester, while the course on topology was in the second semester.

- 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. However, the management mentioned that they sometimes have international students, and if necessary, some professors can give lectures in English in order to adapt to these students. They also mentioned that there is a need to increase both outgoing and incoming student mobility, but did not explain how they plan to achieve this.
- 4.6. Students and alumni did not complain about relationships with teachers. However, the students stated that in their opinion the university has not developed a sufficiently student-friendly learning environment. The reason is that due to the low number of admitted students, lectures are often missed and students have to study themselves and ask for advice if something is not clear. As was explained to ET, the university regulations do not allow teaching in subjects with less than five students. Also, although teachers mentioned the use of different teaching forms, students mentioned that mainly lectures are used. The learning outcomes are normally explained and discussed at the beginning of courses.
- 4.7. The University has adopted the document *A Short Guide for Reviewing and Revising Syllabi* that advises among other aspects how to describe the teaching methodology in the syllabi. The structure of the syllabi corresponded to this document. Nevertheless, only a few traditional types of lessons were described in the course syllabi – lectures, discussions, exercises, homework, exam etc.
- 4.8. Students with whom the ET met did not complain about the assessment.
- 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 4.1.5, the study program does not contain internship. However, during meetings with ET, several participants mentioned the need to include an internship.





4.12. A large number of master students work in parallel as teachers of mathematics at school. Both they and the employers' representative pointed out that the mathematics curricula (both bachelor's and master's) do not take sufficient account the content of the mathematics curriculum in high schools.

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 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.		+
<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.		+
<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.	+	
<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.	+	



<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.	+	
<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.	+	
<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 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.	+	
<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.	n.a.	
<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>	n.a.	

**Compliance level:** partially compliant

**ET recommendations:**

1. *Complement the learning outcomes of the study program so that they are fully consistent with the National Qualifications Framework and the Framework for Qualifications of the European Higher Education Area.*
2. *Apply student-centered teaching methods in the learning process, such as the flipped classroom method, discussions, teamwork, case studies, project-based learning, etc.*
3. *In further development of the study program:*
  - *take into account the needs of the society in mathematicians, in particular by increasing the share of applied mathematics in the study program;*



- *Introduce modern teaching aids in teaching, in particular mathematics software tools;*
  - *Include internship as compulsory subject in the study program.*
4. *Develop and implement mechanisms of cooperation with companies that will ensure:*
- 1) *the availability of a sufficient number of internships in public and private sector and*
  - 2) *sufficient feedback to the university both on the organization of internships and on the competencies of students.*

## 2.5. Students

- 5.1. The admission criteria are stated in the *Statute of the University* as well as in the *Regulation for Master Scientific Studies* and in its amendment. The University Senate issues detailed regulations by which students are admitted.
- 5.2. For admission to the master level studies have the right all candidates who have completed the basic studies (bachelor) with credit 240 ECTS (four years of study) for master studies with 60 ECTS or 180 ECTS (three years of study) for studies master me 120 ECTS. The Faculty may set concrete criteria regarding the right of registration for students coming from study programs different from the field of study where they wish to apply. 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. As the number of study places is supposed to be 20, this allows to conduct an effective and interactive teaching and learning process. However, given the extremely small number of applicants in recent years (less than ten students admitted each year), the study program needs to be radically redesigned.
- 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. However, during the meeting with teachers, it was noted that students are informed about assessment results through their official email and SEMS. Also, one of the graduates mentioned that the results are issued promptly and consultations are held after the results.



- 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 Master Scientific Studies*. All students' rights and obligations are made publicly available.
- 5.11. Consultations are written in course syllabi as one of the forms of teaching methodology. Although the graduates claimed that academic staff was available at sufficient scheduled times for consultation and advice to students, some current students were not entirely satisfied with this.

Standard	Compliance	
	Yes	No
Standard 5.1. 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.		
<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.	+	
Standard 5.3. The study groups are dimensioned so as to ensure an effective and interactive teaching and learning process.	+	
<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.	+	
<i>Standard 5.5.</i> The results obtained by the students throughout the study cycles are certified by the academic record.	+	
<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.	+	
<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.	+	
<i>Standard 5.8.</i> Effective procedures are being used to ensure that work submitted by students is original.		+
<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.	+	
<i>Standard 5.10.</i> The students' transfer between higher education institutions, faculties and study programs is clearly regulated in formal internal documents.	+	
<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.		+

**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. The study program has “Apply the general principles of scientific research methodology” as one of the learning outcomes and “Scientific Research Methodology” as one of the courses. The Diploma Thesis has 25 ECTS which allows planning and completing a decent master thesis. The whole process of – from approving the topic until the defence of the thesis – is thoroughly described in the *Regulation for Master Scientific Thesis* and in its amendment.
- 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. Out of 19 regular academic staff listed in the SER, 13 have at least one course on the study program. The research of the academic staff does in the majority of cases harmonize with the topics they teach.
- 6.5. The research of academic staff - with the exception of one - is internationally visible (for example, in *Google Scholar, GS*). Out of 13, eleven teachers have a positive GS h-index, and the publications of some teachers have relatively high citation scores. On the other hand, the participation in international conferences has been extremely low. Moreover, some other important instruments for high level research – active research groups, regular research seminars, involvement in international research projects etc – are not sufficiently developed.
- 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.
- 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. It was explained to ET that the intellectual property of objects developed at the university belongs to the persons developing them.
- 6.11. Since the study program contains a mandatory subject *Scientific Research Methodology* and relatively large number of credits (25 ECTS) is assigned to the Diploma Thesis, good preconditions are created for engagement of students in research projects. However, the staff explained that it is not yet practiced.

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 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.	+	
<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.	+	
<i>Standard 6.4.</i> The academic staff has a proven track record of research results on the same topics as their teaching activity.	+	
<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.		+
<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.		+



<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.		+
<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.	+	
<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.	+	
<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.		+
<i>Standard 6.11.</i> Students are engaged in research projects and other activities.		+

**Compliance level:** Partially compliant

**ET recommendations:**

1. *Determine the priority research areas of the Department of Mathematics and develop research instruments necessary for high level research.*
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 1388m<sup>2</sup> at its disposal: four classrooms, three laboratories, library, 11 rooms for teachers and some rooms for administration. Video was provided about the facilities. It seems that the Department has enough premises (rooms assigned to other departments can also be used, if necessary).
- 7.2. The study program is of a theoretical nature and does not require specific investments. The Department of Mathematics has enough academic staff to ensure the sustainability of the study program.
- 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 m<sup>2</sup>. However, it is pertinent to note that the internet connection is unstable - it froze several times during the interviews.

- 7.4. Considering the number of students, the number and size of teaching classrooms and laboratories is adequate. At the same time, there is no suitable environment in the public space for students – except the library – to work outside of class.
- 7.5. The role of the library and library services seems to be underestimated: the SER of 72 pages 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, there is a shortage of textbooks in Albanian.
- 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.	+	
<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.	+	
<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.	+	
<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.	+	



<p><i>Standard 7.5.</i> The education institution’s libraries must ensure, for each of the study programs:</p> <p>a) a number of seats in the reading rooms corresponding to at least 10% of the total number of students in the study program;</p> <p>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;</p> <p>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;</p> <p>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;</p> <p>e) a sufficient number of subscriptions to Albanian and foreign publications and periodicals, according to the stated mission.</p>		+
<p><i>Standard 7.6.</i> The infrastructure and facilities dedicated to the implementation of the program is adapted to students with special needs.</p>		+

**Compliance level:** Partially compliant

**ET recommendations:**

1. *Ensure that infrastructure requirements are met for students with special needs.*
2. *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 **quality of the study program has not improved** since 2019: the vast majority of the recommendations for accreditation in 2019 and even for accreditation in 2017 have not been implemented. Having less than ten accepted students per year and 2-3 graduates is really alarming.



2. Resolving many important issues is not the responsibility of the Faculty, but of the university management. For example, 1) intellectual property policies and 2) regulations on technology transfer (including establishing spin-offs and start-ups). It is clear that the **lack of regulation of these issues at university level** is reflected in the results of the evaluation of study programs.
3. The University of Prishtina is the only university in Kosovo that offers bachelor's and master's degree programs in mathematics. Thus, **the university is responsible for higher education in mathematics in Kosovo**. Among other things, this means that the university should have a clear strategy for academic activities in the field of mathematics and provides the necessary resources for its implementation. For example, it would certainly be necessary to create a master's program in applied mathematics (or the master's program in mathematics with two specializations – one focusing on theoretical mathematics and one on applied mathematics) that would focus on the use of mathematical methods in other fields, with the massive use of modern IT tools. However, the current Strategic Development Plan (19 pages) and the Action Plan for 2020-2022 (35 pages) of the university do not mention the word “mathematics” at all.
4. The Department of Mathematics will only be able to realize its full potential if there is good cooperation with other units of the university. For example, a large proportion of mathematics graduates work as mathematics teachers at school. However, mathematics teachers are trained by the Faculty of Education. Problems related to this were repeatedly highlighted during the interviews, mainly due to the lack of coherence between the curricula of mathematics, school mathematics and the mathematics teacher. Therefore, the university should develop and implement effective inter-faculty cooperation mechanisms for the training of specialists in interdisciplinary fields, such as the training of mathematics teachers.
5. Some issues need to be addressed at national level, such as the development of plagiarism detection software. This requires, in particular, the proactivity of the Ministry of Education, Science and Technology.

In conclusion, the Expert Team considers that the study program *Master Program in Mathematics* offered by the Faculty of Mathematics and Natural Sciences of the University of



Prishtina is **Partially compliant** with the standards included in the *KAA Accreditation manual* and, therefore, recommends *not to accredit* the study program.

Overall compliance:

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

### Expert Team

#### Chair

15.03.2022

(Signature)

Peeter Normak

(Date)

#### Member

15.03.2022

(Signature)

Laura Palac

(Date)