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UNIVERSITY OF PRISHTINA "HASAN PRISHTINA"

Bachelor of Computer Science

PROGRAM ACCREDITATION

REPORT OF THE EXPERT TEAM

April, 2024, Prishtina

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1. INTRODUCTION

1.1. Context

Program Accreditation Procedure at University of Prishtina, Faculty of Mathematics and Natural Sciences	
Programs:	**Computer Science, BSc, 180 ECTS (Re-accreditation)**
Site visit on:	**25 March 2024**
Expert Team:	Dr. Miklos Hoffmann Dr. Flavio Canavero Asnate Upmace, Student Expert
Coordinators of the KAA:	Ilirjana Ademaj Ahmeti, KAA Arianit Krasniqi, KAA

Sources of information for the Report:

- *Faculty of Mathematics and Natural Sciences – Self-Evaluation Report*
- *Syllabuses*
- *CVs of the academic staff members*
- *Kosovo Accreditation Agency Accreditation Manual 2024*
- *The Manual for External Evaluation of Higher Education Institutions, KAA 2024*
- *Interviews with stakeholders (site visit)*
- *University of Prishtina Statues*
- *University of Prishtina Strategic Plan*
- *University of Prishtina website*

Additional documentation:

- *Quality assurance reports of the Faculty of Mathematics and Natural Sciences*
- *Statistical data of students and graduates of the programme since 2021*
- *Regulation on disciplinary measures and procedures for the academic staff of University of Prishtina*
- *Regulation on quality assurance and evaluation at University of Prishtina*

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Criteria used for institutional and program evaluations

- *Standards & performance indicators for external evaluation according to the Accreditation Manual of Kosovo Accreditation Agency, 2024*
- *National Qualifications Framework*

1.2. Site visit schedule

Site Visit Programme

Time	Meeting	Participants
09:00 – 09:50	Meeting with the management of the faculty where the programme is integrated	Idriz Vehapi Arben Haziri Kajtaz Bllaca Ferim Gashi Jeton Hysen
09.55 – 10.35	Meeting with quality assurance representatives and administrative staff	Besnik Loxha Ilir Mazreku Artan Alidema
10:35 – 11:35	Meeting with the heads of the study programme	Faton Berisha Ermir Rogova Armend Shabani Artan Berisha
11:35 – 12:35	Lunch break	
12:35 – 13.20	Visiting Facilities	
13:20 – 14:05	Meeting with teaching staff	Qendrim Gashi Eliot Bytyci Ramadan Limani Korab Rrmoku Manush Mustafa
14:10 – 14:55	Meeting with students	Albina Haklaj Art Haxholli Avdyl Dinaj

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		Jonida Olluri
		Rona Latifaj
		Vullnet Gervalla
		Eljesa Kqiku
		Andi Alidema
15:00 – 16:00	Meeting with graduates and employers	Arten Avdiu
		Blendi Rexhepi
		Blerton Sylmetaj
		Raiffeisen Bank Kosovo
		Kode Labs
		Procredit Bank Kosovo
16:00 – 16:05	Internal meeting of KAA staff and experts	
16:05 – 16:10	Closing meeting with the management of the faculty and program	

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

The Faculty of Mathematics and Natural Sciences (FMNS) is an organisational unit of University of Prishtina "Hasan Prishtina" (UP). The faculty was founded in 1971 by the decision of the Kosovo Parliament (Official Journal of ASP of Kosovo no. 37/71). Historically studies of natural sciences were commenced even in the 1960s within the scope of the Faculty of Philosophy. Since 1971, these studies are organized under the umbrella of the Faculty of Natural Sciences and Mathematics.

To keep the overall high quality and efficiency of studies, the curricula of study programs have been continuously improved by the academic staff of FSHMN. With the objective of achieving European standards of studies and aiming for better cooperation with European universities, the Bologna model of studies (3+2+3) was supported and approved at the University of Pristina. In this way, from the academic year 2001/2002, basic studies started according to new curricula. After reviewing and evaluating these curricula, the

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implementation of the approved plans by the Senate of the University of Pristina began in the academic year 2005/06, where some departments have re-formulated the study system to 4+1+3, always in accordance with the Bologna agreement.

FMNS is governed by the Dean supported by Vice-Deans for teaching and student affairs, Vice-Dean for finance and infrastructure, Vice-Dean for quality and science affairs, and the Faculty Council. The latter is the principal policy-making body at faculty level which also oversees other academic-related activities. From the viewpoint of this study programme, the Department of Mathematics is responsible for organising the whole academic process. Improvement of the study programme involves all stakeholders, the Advisory Board (members are industry representatives) and it is supervised by the Coordinator for Academic Development.

The programme aims to the achievement of necessary standards of studies in accordance with the model of studies based on the Bologna Treaty, with the structure of 6 semesters. According to the site visit and the curriculum, this study programme aims to provide knowledge and competences in Computer Science with a strong emphasis on theoretical and mathematical aspects and partly on applications in other disciplines. In this sense this programme is one of a kind in the country.

2. PROGRAM EVALUATION

2.1. Mission, Objectives and Administration

The study program aims to align with the institution mission, meaning that the program goals and values are in line with the university main objectives. The program mission embodies the institution principles, focusing on preparing highly skilled professionals, fostering research skills, and promoting social responsibility. Additionally, the program integrates key values and goals of the institution, such as striving for excellence, collaboration with business and the community, and promoting diversity and ethics.

The Faculty of Mathematics and Natural Sciences is an academic unit that supports the triple mission of the University of Prishtina by providing high-quality education, advancing

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scientific knowledge through research in specific fields, and providing educational expertise to the local and national community.

The Advisory Board of the Faculty of Mathematics and Natural Sciences is also involved in determining the desired learning outcomes that are in line with the National Qualifications Framework and the Framework for Qualifications of the European Higher Education Area.

The program is structured into five main fields: Software engineering; Data; Numerical computation; Management; Other.

In the first year, the program starts with the core subjects of computer science and mathematics, providing a solid foundation for understanding higher-level subjects in the following years. Second and third-year subjects build on each other and ensure that students acquire increasingly advanced concepts of computer science.

Compulsory subjects provide comprehensive training in computer science, but students also have the option of choosing elective subjects to pursue their specific interests or curiosities.

Lectures are conducted in Albanian, but foreign students in mixed groups may have the opportunity to attend consultations in English. Study materials will also be available in English for foreign students, and they may take exams in English. Furthermore, a considerable number of courses will be offered entirely in English whenever there are foreign students.

After successfully completing their studies, computer science graduates are equipped to work in various fields where computer science is applied: industry, economy, banking, insurance companies, etc. The information technology services sector is among the sectors with the highest service exports in the Republic of Kosovo, if not the highest. The job market for graduates is not only Kosovo, but it is global.

All guidelines and regulations for procedural or academic issues are published on the portal of University of Prishtina.

Ethical conduct in research, teaching, and assessment in all academic and administrative activities are defined in the regulations approved by the Academic Senate.

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In the Department of Mathematics, there is a practice of reviewing existing programs every 2 or 3 years, always with the aim of improving or adapting to current circumstances, including requirements from accreditation experts, the job market, and students. This could be standardized even on a yearly basis, without waiting for the next accreditation.

Standard	Compliance	
	Yes	No
Standard 1.1. The study program mission is in compliance with the overall mission statement of the institution.	X	
Standard 1.2. 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	
Standard 1.3. The study program has a well-defined overarching didactic and research concept.	X	
Standard 1.4. 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	
Standard 1.5. All staff and students comply with the internal regulations relating to ethical conduct in research, teaching, and assessment in all academic and administrative activities.	X	
Standard 1.6. 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	

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Compliance level: fully compliant
ET recommendations:

1. *Reviewing the curriculum should be done more frequently as a standard process on a yearly basis.*

2.2. Quality Management

The formal system at the University of Prishtina encompasses a Regulation on Quality Assurance and Evaluation approved in 2016. This regulation also defines the role and responsibility of organizational and academic units at the University of Prishtina for carrying out quality assurance and evaluation activities.

When describing compliance with each specific standard in the SER, FSHMN has been rather formal and general and in many cases, the core meaning of the standard has not been addressed.

There is a structure at the central level that explains the formal responsibilities of all parties. However, the expert team observed a tendency to refer to the central management/administration as the responsible actor also in cases when some action could be taken at the faculty level. This became especially evident during the interviews where the representatives that the review team met were all very vocal, criticised a number of internal arrangements and had plenty of ideas for improvement, however, they did not feel that there is a proper channel to express them or that they would be listened to.

Overall, according to the SER and the Quality Assurance Regulation, the quality assurance processes cover a number of issues – teaching quality, services for students, scientific activity, international cooperation and resources. The evaluation process is administrated at the central level but executed on the faculty level. The UP Statute states that the evaluation of teaching, scientific research, and artistic work of staff shall be conducted in the following manner - internal evaluations through self-evaluation, questionnaires and self-evaluation conducted by academic staff, anonymous questionnaires of evaluation by students, analysis of parameters based on performance reports. However, the university has not introduced a regular self-evaluation of its staff. Nor is the surveying of graduates and employers a regular

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and embedded practice. In the 2021 expert report one of the recommendations was to introduce a system of regular self-evaluation and personal development of the academic staff. The FSHMN's response is that this is implemented at the university level but the expert team did not find certain evidence on that. From the SER and during the meetings the expert team learned that the first steps at surveying employers and alumni have been taken but no faculty-level results were available yet.

While the University of Prishtina claims that the quality assurance processes ensure that both the required standards are met and there is continuing improvement in performance, it is not clear what standards have been defined. Design and implementation of Key Performance Indicators (KPIs) has been a strategic aim of the University of Prishtina already in the previous planning period. However, the SER does not include any references to the work completed at this moment and any information about the actual monitoring of any KPIs.

Quality assurance at FSHMN still very much focuses on the quality of the subjects and the teaching staff. The student questionnaires do not address the quality of the study program as a whole. As mentioned already in the previous expert report in 2021, there are no instruments 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.

As was explained to the expert team, 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.

When asked to provide quality assurance reports based on the surveys to academic staff, students, employers and graduates, the FSHMN presented a PowerBI datasheet and the general description of QA processes. The expert team therefore concludes that there no publicly available quality assurance reports.

Regarding the time for carrying out evaluations, the SER states that the evaluation for program accreditation is in line with the dynamics of programme accreditation and should be done at least once every five years. Also, the assessment of quality improvement needs fits the dynamics of institutional accreditation. No other reports on the overall quality of the programme are foreseen by the regulation. While the five-year period certainly shows cyclicity, the expert team suggests that a shorter period should be defined for internal reports on the programme quality. These reports should be produced to identify possible

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improvements and inform the management rather than for accreditation purposes only. The expert team did not find evidence of any internal quality assurance reports that would be produced on the level of study programme or department, except the summary report on student feedback that cannot be considered a comprehensive report on the quality of the study programme.

Standard	Compliance	
	Yes	No
Standard 2.1. All staff participate in self-evaluations and cooperate with reporting and improvement processes in their sphere of activity.		X
Standard 2.2. Evaluation processes and planning for improvement are integrated into normal planning processes.	X	
Standard 2.3. Quality assurance processes deal with all aspects of program planning and delivery, including services and resources provided by other parts of the institution.	X	
Standard 2.4. 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
Standard 2.5. Quality assurance processes ensure both that required standards are met and that there is continuing improvement in performance.		X

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Standard 2.6. Survey data is being collected from students, graduates and employers; the results of these evaluations are made publicly available.		X
Standard 2.7. 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	
Standard 2.8. The institution ensures that reports on the overall quality of the program are prepared periodically (eg. every three years) for consideration within the institution indicating its strengths and weaknesses.	X	
Standard 2.9. The quality assurance arrangements for the program are themselves regularly evaluated and improved.		X

Compliance level: partially compliant

ET recommendations:

2. *To ensure that all staff of FSHMN participates in the self-evaluation process in a constructive manner and is aware of the conclusions.*
3. *To introduce regular and consistent survey mechanisms for graduates and employers.*
4. *Introduce instruments that would look at the quality of study programme as a whole.*
5. *To define KPI on the study programme level by following the general UP policy on KPI.*
6. *To develop and publish programme and/or department level annual reports resulting from the internal quality assurance processes.*

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2.3. Academic Staff

SER of the study program contains a table of 23 academic staff, of which three professors, eight associate professors, six assistant professors, one lecturer and five teaching assistants, all involved in the study program for a different amount of teaching hours. Of all 23, 17 hold a doctoral degree. The CVs and interviews with the academic staff prove that they have sufficient qualification for teaching the corresponding courses.

The staff of the Department of Mathematics primarily work in the Department, although some of them are engaged in other additional, part-time positions, either as external collaborators in the Specialized Mathematical Gymnasium or in other educational institutions.

Each academic staff has a portfolio containing all his/her annual evaluation reports from students. The portfolio is constantly updated with the student semestral surveys on the courses taught and the peer reviews. Analysis of the surveys and reviews are used to develop improvement plan for the academic staff, if necessary. The reports are analysed by the faculty deans. Deans and academic staff manager are meeting with the staff twice a year to discuss their professional development.

Academic staff is selected by means of job announcement. Contract with the university contains all the obligations related to teaching, communication with students, research, extracurricular activities, etc. All academic staff are required to be in university for 40 hours per week of which 8-12 hours (depending on the scientific degree) are required for teaching.

At the Department of Mathematics, the responsibilities of all teaching staff, especially full-time, include the engagement in the academic community, availability for consultations with students and community service; however, the latter requires additional efforts by this academic community that appears to have only a marginal involvement with the society-at-large.

Each academic staff has its own office space (some are individual and other are shared with another colleague) where they can work on preparation for teaching, study and

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accomplishment of other tasks set by the university within contractual obligations, as well as they can use common spaces and resources (halls, cabinets, equipment, etc.) to realise their mission of educating students.

University of Pristina offers support to the staff to cover the expenses for participation in international conferences and for publications in journals indexed in Web of Science and Scopus. Also, the Ministry of Education provides support for small scientific projects and coverage of Open Access publications. In addition, a number of staff are also participants in COST, Erasmus + projects and have applied to Horizon Europe projects.

The university has some activities for the professional development of academic staff through the center for excellence in teaching. In addition, staff are encouraged to make study visits to institutions abroad to see new practices and create collaboration opportunities with them. For example, visits of two professors of the department in Sweden, Linnaeus University are planned.

Standard	Compliance	
	Yes	No
Standard 3.1. 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.	x	
Standard 3.2. The teaching staff must comply with the legal requirements concerning the occupation of teaching positions included in the Administrative instruction on Accreditation.	x	

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Standard 3.3. 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	
Standard 3.4. 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	
Standard 3.5. 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	
Standard 3.6. Opportunities are provided for additional professional development of teaching staff, with special assistance given to any who are facing difficulties.		x
Standard 3.7. 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
Standard 3.8. Academic staff evaluation is conducted regularly at least through self evaluation, students, peer and superiors' evaluations, and occurs on a formal basis at least once each year. The results of the evaluation are made publicly available.	x	
Standard 3.9. Strategies for quality enhancement include improving the teaching strategies and quality of learning materials.	x	
Standard 3.10. Teachers retired at age limit or for other reasons lose the status of full-time teachers and are considered part-time teachers.	x	

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Compliance level: Substantially compliant

ET recommendations:

1. *Despite the recent improvements, University should devise a systematic plan of activities aimed at the professional development of academic staff. This plan should be articulated in (a) modules and activities for the newcomers to academic staff (possibly inexperienced of teaching and of academic life), and (b) an offer of modules, renewable every year and always updated to the state-of-the-art, enhancing the technical skills of staff.*

2. *The academic community should concretely plan (not only encourage) the staff to be systematically involved in services to the community, both from the editorial point of view (writing books, participating to the review of editorial material, holding conferences for the large public, etc) and from the professional point of view (offering consultancy to the local/regional government and/or public utilities for specific projects with social impact).*

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2.4. Educational Process Content

The study programme is intentionally theory oriented, providing a strong background of mathematics and theoretical computer science, but also including interdisciplinary aspects. The curriculum is in line with the fundamental international recommendations and has been updated since the last accreditation procedure. That said, during the interview phase it was clarified, that the revision of the curriculum should not be restricted to accreditation procedures only. In this field the content should be updated more frequently and regularly, practically every year, according to the fast evolution of computer science. Another aspect is the uneven distribution of the credits. It is insufficiently justified why the credits are not proportional to the weekly hours – this should be updated in order to avoid the impression of being more important and less important courses.

The curriculum and the study programme are fully in line with legal requirements, the National Qualification Framework and the Framework for Qualifications of the European Higher Education Area as well.

The individual components of the program are combined in a well-structured, logical manner. The forms of teaching and learning are suitable to achieve some of the planned learning outcomes. However, since the learning outcomes are not properly assigned to the individual courses, it is not fully justified that the students can achieve all of these competencies, notably the soft skills, ethical, legal and social issues. These should be clearly and explicitly incorporated to the curriculum.

The courses and disciplines of the curriculum have detailed and analytical syllabi which comprise all the requirements. That said, the form of these syllabi is not unified, which is an issue.

The language of the study is Albanian.

During the onsite visit it was clearly assured that the student-teacher relationship is outstanding, it is a real partnership in which each assumes the responsibility of reaching the learning outcomes. Outcomes and requirements of the courses are clearly explained at the beginning of each semester.

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Although teaching commitment of the staff has been clearly demonstrated during the onsite visit, teaching and learning forms are very briefly and superficially described in most course description. As a consequence, no clear teaching strategies are identified, and it is not fully ensured that the teaching methodology fits for the different types of learning outcomes programs are intended to develop.

Student assessment mechanisms are well established and based on a fair evaluation procedure. No issues have been reported during the online visit.

The grading system is also well established and it is compatible with the European standards. No issues have been reported during the online visit.

Well-defined policies and procedures have been established for handling those cases where student achievement are inadequate or inconsistently assessed. Students can complain to the Dean, which mechanism – due to the interview – works adequately.

As a clear improvement since the last accreditation procedure, an industrial practice for 6 credits has been incorporated into the curriculum, which is clearly positive.

Industry partnership has been built up to assure the smooth workflow of this practice, although it is not fully assured that all of the students can find the practice place best suitable for their needs.

Standard	Compliance	
	Yes	No

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Standard 4.1. 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.		x
Standard 4.2. 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	
Standard 4.3. 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 list at least 7 learning outcomes for the study program under evaluation.		x
Standard 4.4. 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	
Standard 4.5. If the language of instruction is <u>other than Albanian</u>, actions are taken to ensure that language skills of both students and academic staff are adequate for instruction in that language when	n/a	

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students begin their studies. This may be done through language training prior to the commencement of the program.		
Standard 4.6. 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	
Standard 4.7. 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	
Standard 4.8. 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	
Standard 4.9. 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.	x	
Standard 4.10. Policies and procedures include actions to be taken in to dealing with situations where standards of student achievement are inadequate or inconsistently assessed.	x	

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Standard 4.11. 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	
Standard 4.12. In order to facilitate the practice stages, the higher education institution signs cooperation agreements, contracts or other documents with institutions/organisations/practical training units.	x	

Compliance level: substantially compliant

ET recommendations:

1. *Instead of accreditation-centered revision, a mechanism of yearly supervision of the curriculum must be established.*
2. *Each learning outcome should be assigned to one or more courses to clarify where these competences can be gained.*
3. *A clear and flexible teaching strategy must be formulated in a detailed form, well-tailored to each sub-discipline.*
4. *The form of the syllabi should be unified.*

2.5. Students

There is a clear and formally adopted admission procedure at the institutional level. The admission is based on a public call, secondary school results and entrance examination in mathematics. The proposal for admission quota is developed by the department and then approved by the faculty council and university senate.

The admission is open to all interested applicants. The expert team was informed both by the students and the staff, that the entrance examination in mathematics requires a solid knowledge of mathematics. At the same time, it was mentioned that the level of mathematics

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required for completing the study programme is also high therefore a number of students struggle with it and decide to quit the programme.

There is a regulation on size limits for study groups: a maximum of 70 students for lectures, 25 for numerical exercises, and 12 for laboratory sessions. These limits ensure an effective teaching and learning environment, facilitating interaction and personalised attention, in line with the standard's requirements. During the on-site visit, laboratories and classrooms were inspected, and the available seating capacity for student groups was checked.

The university employs various assessment methods, including exams, colloquia, seminar papers, practical tests, and project presentations in engineering. There are three designated exam terms: January, June, and September and additional exam terms may be announced if deemed necessary by the UP Senate.

The exam results are communicated through the SEMS system. If dissatisfied with the result, the students can request a session with the professor. If there is still disagreement regarding the assessment, the students can submit a written complaint to the FMNS Dean that may result in the appointment of a commission to reassess the examination.

The university electronic platform SEMS is used for documenting the student achievements throughout the semester. However, if the students' achievements (grades) are analysed, the expert team did not find any proof that the issue of student dropout and long completion times of the programme would somehow be monitored and addressed by the faculty management, although the SEMS foresee such a possibility. The expert team would therefore suggest that this issue is attended to and certain measures are taken to be fully informed on the potential dropouts, the reasons for dropping out or not progressing from one semester to another.

Upon successful completion of all obligations, including passing all courses and defending their thesis within the study program, students are conferred the title of "bachelor of science".

The university provides flexibility in the duration of studies, allowing students to complete their program within double the standard duration (up to 6 years). In addition to this, it is also possible to request a special extension from the FMNS council that would guarantee an additional year.

The measures to safeguard the integrity, quality, and ethical aspects of research work and studies to prevent duplication or potential abuse by students. This includes the establishment of ethical and disciplinary commissions at the faculty level, where any suspected violations are reported and reviewed.

The university benefits from a system for plagiarism detection provided by central authorities at the University of Prishtina and the Ministry of Education, Science, and Technology (MEST) of the Republic of Kosovo. This system aids in detecting instances of plagiarism or academic misconduct. Even though there is access to a web platform plagiarism check

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(https://plagiarismcheck.org/), which assists in detecting similarities in submitted work and generating unbiased results, they do not have software prepared for the rapidly growing field of artificial intelligence.

The information about student rights and obligations, as well as the relevant bodies to address any concerns regarding equitable treatment, is publicly available. These rights and obligations are outlined in the university statute, which is accessible on the university website (https://uni-pr.edu/desk/inc/media/661032D5-33DD-4CD6-B20F-BFE0AB89FB98.pdf). This ensures transparency and clarity regarding student rights and responsibilities. Although the information formally is available, the students met by the expert team were rather critical about several issues, for example, the contact point regarding the study programme where it is not clear who should be the right person and the favorite professor is usually approached.

The process for student transfers is outlined in the university's statute. According to this statute, students have the right to transfer between study programs if they have passed at least 50% of the courses in the previous program that are relevant and accepted in the new study program. To initiate a transfer, the student must submit a request to the study committee of the faculty where they wish to continue their studies, providing evidence of meeting the transfer criteria. The decision for the transfer is made by the faculty council, based on the recommendation of the study committee.

These regulations also apply to students transferring from other universities to the University of Prishtina. Additionally, there is a formal system for transferring ECTS credits from an exchange semester attended in another institution. However, the students interviewed by the review panel expressed their concerns that ERASMUS mobility is a burdensome process as the courses that have not been attended at FMNS, will have to be passed anyway, despite the full academic semester at an exchange institution.

According to the SER and the meetings with staff and students, during the first lecture of each course, the teacher presents the course syllabus along with the scheduled consulting hours. These consulting hours are published in the SEMS system. All teaching staff members confirmed the availability of consultations two times a week, one hour each.

In the opinion of the expert team, in addition to formal consultation hours, the students should be more encouraged to approach the teaching staff and administrative staff for any relevant requests or needs. This would foster a supportive learning environment where students feel comfortable seeking assistance when needed and providing suggestions for improvement.

Standard	Compliance

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	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.	X	
Standard 5.2. 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	
Standard 5.4. Feedback to students on their performance and results of assessments is given promptly and accompanied by mechanisms for assistance if needed.		X
Standard 5.5. The results obtained by the students throughout the study cycles are certified by the academic record.	X	
Standard 5.6. Flexible treatment of students in special situations is ensured with respect to deadlines and formal requirements in the program and to all examinations.	X	
Standard 5.7. Records of student completion rates are kept for all courses and for the program as a whole and included among quality indicators.	X	
Standard 5.8. Effective procedures are being used to ensure that work submitted by students is original.		X

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Standard 5.9. 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	
Standard 5.10. The students' transfer between higher education institutions, faculties and study programs is clearly regulated in formal internal documents.		X
Standard 5.11. 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. *To ensure that the performance of students at the risk of dropout is carefully monitored and appropriate measures are taken to address the dropout and assist students with progression.*
2. *To further develop the mechanisms for plagiarism check, in order to ensure that there is an appropriate tool that is available to everyone and consistent and rigorous application of it.*
3. *Further investigate the issue of student transfer from and to ERASMUS exchange to ensure the principle of automatic recognition of the curricula covered in the partner institution that follows the best practice in the European Higher Education Area.*

2.6. Research

The academic staff contracts and university regulations require the academic staff to engage in research. The Faculty of Natural Mathematical Sciences and its Department of

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Mathematics has an almost sufficient number of scientific papers from its staff: on average, the target of at least one scientific/applied research publication per year during the evaluation period is close to be met, but the production is largely uneven among the Department's staff members.

One of the main criteria for the advancement of the academic staff is the scientific activity and this is clearly specified in the regulations for the advancement of the staff of the University of Pristina. During the process of selection and promotion of the academic staff it is required that the scientific papers be relevant to the field of study of the candidate as well as to the subjects in which they will compete for appointment and promotion. Also, the regulations for staff advancement clearly specify what is taken as genuine research, in accordance with international standards. Recommended journals considered during the advancement process are the publications of the Web of Science and Scopus, with the highest evaluation coefficients.

Research of academic staff is validated through scientific and applied research publications. however, other forms of research dissemination and valorization, like technological transfer through consultancy centers, scientific parks and other structures still need to be adopted in future years.

Most of the staff graduated abroad and are also part of international projects, which helps them to understand the practices of real research, in accordance with international standards.

In addition to obligations related to the appointment and promotion process, university staff are encouraged to continuously publish and participate in national and international conferences, symposiums, and congresses with their works.

The study program has defined scientific/applied research objectives: financial, logistic and human resources are being allocated, but larger investments need to be planned for achieving the proposed research objectives.

Students are engaged during their bachelor studies in research in the form of seminars and in national and international conferences through projects.

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The professors of the Department of Mathematics, and especially those who teach in Computer Science, are part of Erasmus + programs, COST projects and are applying for new projects. For more. have close cooperation with Professors from Sweden, Germany, England, Austria.

The University of Pristina has policies for intellectual property and the Department encourages staff and students to create spinoffs for the commercialization of ideas. However, success stories of profitable initiatives still need to be documented.

Standard	Compliance	
	Yes	No
Standard 6.1. 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.		x
Standard 6.2. 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	
Standard 6.3. 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	
Standard 6.4. The academic staff has a proven track record of research results on the same topics as their teaching activity.	x	

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Standard 6.5. 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	
Standard 6.6. Research is validated through: scientific and applied research publications, artistic products, technological transfer through consultancy centres, scientific parks and other structures for validation.		x
Standard 6.7. 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
Standard 6.8. Academic and research staff publish under the name of the institution in Kosovo they are affiliated to as full-time staff.	x	
Standard 6.8.(1) 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	
Standard 6.9. Policies are established for ownership of intellectual property and clear procedures set out for commercialization of ideas developed by staff and students.		x
Standard 6.10. Students are engaged in research projects and other activities.	x	

Compliance level: Substantially compliant

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ET recommendations:

1. *Devise a strategy aimed at the objective of having a more homogeneous production rate among the academic staff and increasing the production of all members above the minimum level requires by standards;*
2. *Elaborate a plan for increasing research capacity of the university through collaborations with the local and foreign institutions with the proven research record and international research grants;*
3. *Strengthen the research commercialization structure of the university in collaboration with industry partners.*

2.7. Infrastructure and Resources

The overall infrastructure of UP is sufficient to support the study programme of Computer Science BSc. First of all, the building of FMNS is not a modern one therefore in some places it would require renovation or greater adaptation towards internal stakeholders needs. Fortunately the faculty authorities are aware of these demands and are eager to improve infrastructure within available financial resources. A new faculty building is planned to be put into service in 1-2 years, and it could solve many infrastructural problems like the lack of group work rooms or more space for computer laboratories and exercises.

The Faculty and the Department has a financial plan (a budget) confirmed by the university senate. That said, although the governmental support can be supposed, no clear financial plan has been presented at the level of the study programme to support the long term sustainability, especially there no clear plan for the case of potential delay of the new building.

The current number of classrooms and available equipment (assigned to the faculty) allow covering the study programme within actual learning capabilities. At the site-visit, the ET verified the basic quantity and quality of the installed hardware and software resources. This part of the visit indicated that the infrastructure fulfils the fundamental criteria but further development and ongoing adjustment to the labour market is inevitable nowadays. As the

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new study programme is both theoretical and practice oriented, access to literature and recent findings of the field is a must.

The number of seats and the size of the classrooms and labs are proportional to the expected number of enrolled students. However, out of the library there is a lack of suitable environment in the public spaces of the building for students getting together and working together out of the labs.

The faculty has its own 60-metre-squared library with a peaceful place for study and discussions. However, at the time of the site visit the number of books in the core topics of computer science and mathematics is extremely limited. The access to large scientific databases is also limited, only EBSCO is mentioned explicitly. This is overall insufficient for keeping the high quality of this study programme.

The building and infrastructure is partially adapted to students with special needs but there is still room for improvement.

Standard	Compliance	
	Yes	No
Standard 7.1. 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
Standard 7.2. 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	

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Standard 7.3. 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 softwar**e 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	
Standard 7.4. **The number of seats** in the lecture rooms, seminar rooms and laboratories must be r**elated 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	

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Standard 7.5. 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; e) a sufficient number of subscriptions to Albanian and foreign publications and periodicals, according to the stated mission.		X
Standard 7.6. **The infrastructure and facilities** dedicated to the implementation of the program is **adapted to students with special needs.**	X	

Compliance level: substantially compliant

ET recommendations:
1. *A library development plan is a must in terms of available books and wider access to scientific databases*
2. *A clear financial and infrastructural plan should be established for the case of potential delay of the new building*

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3. FINAL RECOMMENDATION OF THE ET

The experts would like to thank all the participants of the site visit, and the staff members who prepared the SER for their valuable help and support throughout the accreditation process. Considering the documentation provided and the findings of the site visit, the Accreditation Panel recommends the following:

1. Mission, objectives and administration: fully compliant
2. Quality management: partially compliant
3. Academic Staff: substantially compliant
4. Educational Process Content: substantially compliant
5. Students: substantially compliant
6. Research: substantially compliant
7. Infrastructure and resources: substantially compliant

Compliance level: substantially compliant
Student quota recommended/Three or Five Years: 120 students/ Three years*

*The department will need 3 years from now to settle in the new building

Expert Team

Member

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(Signature)	**Mikós Hoffmann**	**April 20th, 2024**
	(Print Name)	(Date)

Member

(Signature)	**Flavio Canavero**	**April 20th, 2024**
	(Print Name)	(Date)

Member

(Signature)	**Asnate Upmace**	**April 20th, 2024**
	(Print Name)	(Date)

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