

Akkreditierungsagentur
im Bereich Gesundheit und Soziales
Accreditation Agency in Health and Social Sciences



Assessment Report

on the Provisional Authorization of

**the Study Program
“Applied Computer Sciences”
(Bachelor of Applied Computer Sciences)**

**at “Bioterra” University of
Bucharest, Romania**

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1 Introduction

Study programs in Romania require authorization for provisional functioning, as established by Law no. 87 of 2006, which approved the Emergency Decree no. 75 of 2005. The Romanian Ministry of Education, Research, Youth and Sport is responsible for authorizing provisional functioning of study programs. According to the Law of National Education no.1 of 2011 (hereinafter "Law of National Education") Art. 150, Par. 1, the decision of whether to grant authorization is contingent upon the evaluation and subsequent recommendation of the study program by an external quality assurance agency registered in the European Quality Assurance Register (EQAR).

After authorization for provisional functioning has been granted by the Romanian Ministry, the applicant higher education institution may enroll students in the respective study program. Following the successful graduation of three subsequent cohorts (taking approximately five years for three year study programs), the higher education institution must submit its application for provisional authorization. The provisional authorization procedure is similar to that for accreditation: an external evaluation by an EQAR-listed quality assurance agency, takes place on the basis of which the Government decides whether to accredit or provisionally authorize the study program.

The AHPGS Accreditation Agency was tasked with accrediting and provisionally authorizing Bachelor study programs offered by "Bioterra" University of Bucharest, Romania (hereupon: the University) in April 2018.

In October 2018, the experts received the relevant documents for the evaluation of the program and to review the available information, determine particular strengths and weaknesses, and identify any open questions regarding the study programs in writing.

The on-site visit of the University took place on January 24-26, 2019. In the course of the on-site visit, experts conducted discussions with the University management, representatives of the faculties, the teaching staff of the programs as well as with students currently studying in the programs. Furthermore, they inspected the learning premises, such as lecture halls, seminar rooms, classrooms, library, and computer classes. Moreover, the experts had the opportunity to see the equipment and the capacity of the laboratories.

The following five Bachelor study programs were subjects of the periodical evaluation procedure:

Faculty of Computer Sciences:

- “Applied Computer Sciences”

Faculty of Law:

- “Law”,
- “European and International Law”

Faculty of General Medical Assistance:

- “General Medical Assistance”

The Accreditation Commission of the AHPGS nominated the following experts to conduct the on-site visit:

As representatives of academic institutions:

Alexander Bordan (B.A.)

Albert-Ludwigs University Freiburg, Germany

Prof. Dr. Gabriele Roth-Dietrich

Mannheim University of Applied Sciences, Germany

Prof. Dr. Walter Swoboda¹

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Prof. Dr. Peter Schäfer

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Prof. Dr. Carolin Sutter

SRH University Heidelberg, Germany

¹ The experts shown in italics did not participate in the on-site visit of the University.

Prof. Dr. Uta Gaidys

Hamburg University of Applied Sciences, Germany

Prof. Dr. Jan Keogh

Fulda University of Applied Sciences, Germany

Prof. Dr. Marion Halfmann

Rhine-Waal University of Applied Sciences, Kleve, Germany

Prof. Dr. Edgar Köslér

Catholic University of Applied Sciences Freiburg, Germany

Dr. Rolf Heusser

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The proceedings of the Process of Provisional Authorization conform to the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) as well as to the Art. 150 of Romania's Law no. 1 of National Education 2011; the Quality Evaluation Activities Guide for University Study Programs and for Higher Education Institutions: Part 1 Study Programs Accreditation External Evaluation Guide, and the Methodology for External Evaluation, Standards, Standards of Reference, and List of Performance Indicators of the Romanian Agency for Quality Assurance in Higher Education ("Methodology").

The expert group surveyed the proper implementation of the criteria, standards and performance indicators, as specified in the above mentioned legal texts as well as the compliance of the program with the normative criteria, as stated in the "Methodology".

The documents submitted by the University, the experts' feedback to the documents, the observations made during the on-site visit, the results of discussions with the representatives of the University serve as the basis for the statements made in the Expert Report. Since the Expert Report investigates the fulfilment of the standards and criteria specified in the "Methodology", the

structure of the Expert Report follows the logical succession of these criteria, as they are formulated in the document.

The following Fields of Activity pertaining to the program and the University were assessed by the expert group with respect to the corresponding criteria and standards: (A) Institutional capacity, (B) Educational effectiveness, and (C) Quality management, each with the corresponding Criteria and Standards.

2 The study program to be provisionally authorized

The study program "Applied Computer Sciences" will be offered by "Bioterra" University of Bucharest, Romania, Faculty of Computer Sciences. The period of education is six semesters (three years).

The program will be launched in Romanian in the Bucharest and Buzau, which is one of the University's branches, and in English in Bucharest. The University seeks provisional authorization for the Romanian and English-taught program.

The main objective of the study program "Applied Computer Sciences" is to provide students with a profound knowledge of computer science on a European level and beyond. Furthermore, scientific approaches to the subject of computer sciences constitutes a goal of the study program. According to the European Credit Transfer System (ECTS), 180 credit points (CP), i.e. 30 CP per semester, are required in order to graduate from the program. One CP is equivalent to 25 workload hours. The total workload of the program constitutes 4,740 hours, of which 2,150 are contact hours, 112 are practical training hours and 2,426 are independent study hours. In addition, 52 practice hours are designated for counseling sessions with the teaching staff in order to develop the diploma project. To the total amount of 180 CP another 10 CP are added for the thesis (*see B.1 in detail*).

The program consists of 70 modules, of which 58 are obligatory, and twelve are optional. All modules are program specific and must be completed throughout the entire study program.

Modules are divided into compulsory, optional, and elective. Compulsory and optional modules are an obligatory part of the curriculum. Elective modules are not required in order to graduate but are offered to enrich the curriculum. Credit points allocated to the elective modules are added on top of the required total of 180 CP obtained by the students upon graduation and are mentioned separately in the transcript of records.

Admission requirements are centralized within the University. They include a Baccalaureate degree or equivalent diploma. Foreign students have to provide a Romanian language certificate (level C1) issued by institutions authorized by the Ministry of National Education. Applicants for the English-taught program

will have to turn in an English language certificate (level C1). Students receive information about the amount of the tuition fees in advance.

Upon graduation, students are awarded a Bachelor graduation diploma (Diploma de Licenta, cf. Law of National Education no. 1 from 2011), as well as a Diploma Supplement, composed in both Romanian and English. Graduates of the Bachelor study program “Applied Computer Sciences” are awarded the academic degree “Bachelor of Applied Computer Science”.

The experts take note that the formal requirements of the study program are in accordance with the national Romanian requirements.

The first cohort of the Romanian- and English-taught “Applied Computer Sciences” study program will be admitted in 2019/2020. The study program has not been evaluated by ARACIS² and, therefore, is not yet provisionally authorized.

Since the study program will start in 2019/2020, no students are enrolled in this program yet. Annual admissions are organized in two sessions during July and September.

The University with its Administration Board confirms in a formal declaration that it is prepared and able to provide the financial support necessary for the effective functioning of the program in conditions that correspond to the standards of the Romanian program of studies.

² In Romania, there is only one higher education rating agency: RAQAHE (the Romanian Agency for Quality Assurance in Higher Education). ARACIS is the acronym for the same agency, in Romanian (Agenția Română de Asigurare a Calității în Învățământul Superior).

3 Expert Report

At the beginning of October 2018, the application documents of the University were made available to the expert group for written evaluation. The expert group assessed the “Applied Computer Sciences” study program based on the Romanian standards and regulations specified under Section 1. They have also examined the factual and other program-related aspects described in the documents. The results of this review were forwarded to the AHPGS in November 2018.

Based on the written evaluation of each expert and the on-site visit, the expert group jointly agreed upon an Expert Report.

A. Institutional Capacity

A.1. Institutional, administrative and management structures

“Bioterra” University of Bucharest is a private University that was accredited in 2002 by the Romanian Agency for Quality Assurance in Higher Education (ARACIS) by Law no. 480/2002, published in the Official Gazette no. 512/2002. Based on that, it is assured that the University meets the requirements set by the national Romanian Quality Assurance Agency for Higher Education. Moreover, in the course of this provisional authorization procedure, the University was also subject to an External Institutional Evaluation carried out by AHPGS.

The University was initially part of the “Bioterra” University Foundation Bucharest which was legally established in 1994 following the initiative of leading personalities of the didactic and scientific life in applied bioengineering, economic engineering, rural tourism, industry food, phytosanitary and zoo veterinary control of food, law and legislation.

Currently, the University has five faculties: Faculty of Agrotouristic Management, Faculty of Food Products Engineering, Faculty of Law, Faculty of Food Control and Expertise and Faculty of General Medical Assistance. There are six accredited bachelor’s degree programs offered by the University. The University intends to offer the bachelor programs “European and International Law” and “Applied Computer Sciences” in the winter semester of 2019-2020.

Moreover, three accredited master programs are offered: “Investigation of Acts of Terrorism and Public Security”, “Performance Management in Public Catering, Agrotourism and Consumer Protection”, and “Inspection, Expertise and Legislation on Food Safety, Environmental Protection and Consumer Protection”.

There is a total of 1,958 students enrolled in the University, 1,406 studying for a bachelor’s degree and 240 for a master’s degree. A total of 552 students are studying in one of the branches (300 in Buzau, 88 in Focsani, 96 in Alexandria, and 68 in Slobozia). Overall, 1,718 students are studying in a bachelor’s degree.

There are branch managers in every study location who ensure the operative management of the branches. The branch manager and the individuals responsible for study programs are kept in permanent connection with University,

Faculty and Department management bodies in meetings in Bucharest. The curriculum of each study program is consistent across University locations.

The expert group assessed the compatibility of the written documentation and the University's mission and objectives. Based on the information provided in the written documentation, the experts have determined that the main objective of the University is to offer a variety of higher education study programs. The programs aim at meeting the needs of the Romanian labor market and comply with national and international standards of education. The experts discern that there is a good regional focus. Missions and objectives are clearly stated, and the institution supports the program and staff in line with the aims and objectives of the program and common standards of integrity (e.g. "University Code of Ethics").

Missions and objectives of the programs are stated by the University. With a glance at the study programs currently offered at the University, it becomes clear that these formulated missions and objectives are coherent. The University's portfolio of study programs is diverse.

However, with the two new programs offered ("Applied Computer Sciences" (2019/2020) and "General Medical Assistance" (2017/2018)), the portfolio of the University is expanding to health-related and IT-related study programs. According to the University, the new study programs correspond to market demands, which will concomitantly lead to an increase of student numbers. From the perspective of the experts, this argumentation is comprehensible. Nevertheless, the University should keep in mind that economic and market-based objectives could eventually collide with academic freedom. In addition, an increased orientation towards the University's mission slogan "Sustainability" (specifically in the ecological sense) would be a desirable direction of development in order to highlight the unique characteristics of the University's study programs.

Another aspect of the University's mission, as stated in the research plan, is to sustain and further intensify research activity among students with the goal of enabling them to contribute to the general advancement of knowledge in their respective fields.

With regard to the administrative structure concerning the collaboration between the department, faculty and University units, the experts encourage the

University to look for common interests and to combine forces and resources. This will also help to facilitate the coordination of research activities.

The expert group has been convinced of the University's commitment – as an institution – to offer high-quality educational opportunities. It was asserted that the University and its study programs function within the Romanian legal framework and that the institution promotes academic integrity and freedom among its students. Besides, the University regularly monitors its own activities, and students take an active part in the management. Moreover, the needs of students with disabilities are taken into consideration (e.g. admission and exam requirements).

Internal assessment and audit processes take place in order to monitor the achievement of the objectives of the University. The experts have observed an active collaboration between the administrative and teaching structures. Nevertheless, the experts recommend that the University divides hierarchical units and their functions within the University clearly, thus promoting transparency. The University has developed an ethical code of which its members are aware.

Regarding the internationality, the experts took notice of the measures put in place by the University in order to pursue its international orientation. The University achieves mobility of its students by means of the European Credit Transfer System (ECTS) and the Erasmus exchange program. The study recognition under the Erasmus program is considered a strength. Still, from the experts' point of view, the University, apart from maintaining its role in Bucharest and its surroundings, should present its internationalization measures in a more open and distinct manner (e.g. setting up more English-taught programs as well as partnerships with foreign universities). This way, it could further promote its attractiveness and character by standing out from other higher education institutions. In addition, setting up international summer schools could help to establish connections between international students and students of the University.

The experts recognize the possibilities for further development in the strategic alignment of the University in general.

Taking these facts into account, the expert group regards criterion A.1 as fulfilled.

A.2. Material resources and infrastructure

Overall, the experts notice that the University has sufficient material and financial resources with regard to the study programs currently being offered. Facilities are fully in possession of the University. According to the University, the institution possesses sufficient financial resources and equipment for the program.

Regarding the premises and resources available for the desired number of students in the study program “Applied Computer Sciences” (120 per year in English/Romanian-taught study program Full-time in Bucharest and 60 in either Romanian or English-taught study program in Bucharest/Buzau), the experts conclude that the University is able to offer this number of study places. The experts also point out that scholarships are foreseen in the “Scholarship Regulation” of the University.

With respect to the library and lecture halls, the experts assess that the lecture halls and seminar rooms are sufficiently equipped for providing adequate teaching and learning processes (e.g. computers). It became clear though that the program-specific literature is insufficient. Therefore, the experts urge the University to extend the library significantly both regarding printed and electronic books as well as databases (e.g. IEEE or ACM Journals). In this regard, the expert group encourages the University to establish more partnerships with similar national and international institutions (libraries, publishing houses) in order to provide students and teachers access to an even wider range of databases as well as learning and scientific material. The experts recommend that the University take advantage of publically accessible resources that are free of charge, such as the Institute for Electrical and Electronics Engineers (IEEE) or links to Massive Open Online Courses (MOOC). Furthermore, through the publishing house W3L, instructive videos are available that provide large amounts of information. Additionally, the condition of the lecture halls and other facilities are quite heterogeneous. In some cases, modernization measures should be initiated with respect to safety issues on the one hand and better learning conditions and equipment on the other hand.

With regard to the aspect of financing, the experts recognize that the University, whose main source of funding is students’ tuition fees, is quite restricted in terms of finding new financing sources. This is caused by the declining number of students in the region as a result of significant demographic chang-

es in Romania. As a response to the current difficult situation, the experts first and foremost recommend raising the attractiveness of the University by offering the current study programs also in English in order to attract not only interested Romanian but also foreign students.

Taking into account the University's need to enhance its infrastructure and to improve the teaching and learning settings, the expert group considers criterion A.2 to be partially fulfilled.

The University has to provide students with a wider range of databases as well as learning and scientific material.

B. Educational Effectiveness

B.1. Content of the study program

The study program "Applied Computer Sciences" will be affiliated with the Faculty of Computer Sciences. The study program's mission, general and specific learning objectives, curriculum and outcome competences were presented in the written documentation. The curriculum description specifies the qualification objectives, competences (knowledge and understanding, explanation and interpretation etc.) and learning outcomes for each module. The experts point out that the structure of the study program includes a set of relevant topics.

The study program's goal is to equip students with profound competencies in computer sciences. The program is designed to prepare IT-specialists. Graduates will be able to respond to the current labor market demands in Bucharest specifically and in Romania in general. Judging from the curriculum and module descriptions, students completing the program are fit for a professional position. According to the University, graduates of the study program can access the labor market as "Database Administrator", "Computer Network Administrator", "Analyst", "Research Assistant in Computer Science", "Research Assistant in Mathematics and Computer Science", "Teacher in Gymnasium Education", "Programmer", "Computer Systems Designer". Students are supposed to form an understanding of scientific approaches and gain knowledge in the area of computer sciences. The skills and abilities taught qualify students to work on a European level and beyond. Students are supposed to acquire IT-specific technical terminologies. Moreover, the study pro-

gram shall familiarize students with practical aspects of the business environment, techniques and instruments currently employed in computer sciences.

The experts agree with the above-mentioned qualification objectives. Moreover, the study program “Applied Computer Sciences” also focuses on qualifying students for social responsibility and personal development throughout all modules. The experts conclude that graduates have good employment opportunities on the Romanian job market.

The curriculum of the study program “Applied Computer Sciences” comprises of compulsory, optional and elective subjects. Compulsory and optional subjects are an obligatory part of the curriculum. Regarding the optional modules, students have a choice between two modules. Elective modules are not necessary in order to graduate but they are offered to enrich the curriculum (e.g. “Physical Education”). Credit points allocated to elective subjects will be added on top of the 180 credit points obtained by the students upon graduation and will be mentioned separately in the transcript of records.

The experts appreciate the optional modules, which complement the offered courses. The program is adequately structured; modules are described in detail (e.g. with objectives, aimed competences, content and literature) and the program is relevant as the intended career is clear. Graduates are fit for a professional position in Romania and beyond. However, the experts want to encourage the University to include more competences with regard to scientific research, e.g. skills in the collection and filtering of information.

The experts take note of the fact that 100 % of the curriculum is laid down as a rule on a national level with regard to the module titles and the title of the study program. For example, the experts are critical of the fact that two CP for Physical Education will be included as a compulsory module in the curriculum. From the experts’ point of view, this appears to be quite restrictive and, thus, limiting the academic freedom. The experts encourage the University to use the academic freedom wherever possible to sharpen its profile and strategy as well as to adhere to European standards, striving to become relevant in an international context by defining its unique selling point.

Alongside the theoretical curriculum, practical training is part of the curriculum. The practical part comprises 112 hours after the completion of the 4th semester. The practical training will be carried out in businesses such as IT-firms, banks or other service providers within the field of the study program.

In addition, 52 hours are designated for counseling sessions with the teaching staff in order to develop the diploma project. From the experts' point of view, the University should try to collaborate with international employers to offer the students perspective and various possibilities for practical training. In addition, the experts deem it important to include more mandatory practical training in the curriculum. The experts highly recommend that the University reach out to corporations in the IT-industry in order to allow students to do internships at these firms or to invite professionals from the IT-sector to give talks at the University.

The expert group points out that research competencies are part of some modules. The integration of the research conducted by the teaching staff could be more transparent in the curriculum.

The experts strongly recommend using synergies by increasing interdisciplinarity among the study programs wherever possible, e.g. when communicating research methods. Furthermore, research methods could be used to assist other faculties, e.g. by way of an evaluation of data or the development/implementation of software.

The credit system applied in the "Applied Computer Sciences" study program and at the University in general complies with the *Order of the Romanian Ministry of Education no.3617/2005* on the generalized application of the European Credit Transfer System.

The subjects in the curriculum are evaluated at the end of the semester through: written and oral (colloquiums) exams. The evaluation is based on the specific procedures stipulated by the Quality Manual. Usually one assessment method is applied per module. The experts highlight that all exams should be competence-oriented, thus multiple-choice tests should be reduced if not discarded in general. Furthermore, the experts recommend offering written exams in the first year and oral exams as well as project works in the higher semesters.

There are winter and summer exam sessions. They extend over a period of three to four weeks after the period of teaching activities. Should a student not pass the exams during these sessions, re-examinations may be taken during a reexamination period. Re-examination periods take place after each academic year. Each exam may be re-examined one time.

For the evaluation of the students' performance in exams, the University applies a 10-point grading system (10 being the highest grade). The minimum passing grade is 5 points. The minimum grade for passing the graduation exam is 6.

The study program "Applied Computer Sciences" is completed by composing a Bachelor thesis (10 CP). The license exam consists of presenting and defending the license project.

The Bachelor degree examination takes place in accordance with the Ministry Decree regarding the general framework for organizing final examinations in higher education and based on the institution's own procedure approved annually by the University Senate. The Bachelor degree examination can consist, according to regulations in force, of two tests, as follows:

- a) Test 1: assessing fundamental and specialized knowledge
- b) Test 2: presenting and defending the Bachelor's thesis

According to the new "Specific Standards regarding External Academic Quality Assessment for Associated Bachelor and Master level studies", the number of credits allotted to the promotion of the license thesis (10 CP) is added to the 180 ECTS credit points for the entire program. From the experts' point of view, the thesis is an obligatory part of the curriculum. Thus, the final thesis should be part of the official workload of the study program. Nevertheless, the experts acknowledge that the addition is a singularity in Romania due to the National Law.

In conclusion, graduates of the study program "Applied Computer Sciences" have ample employment opportunities. Nevertheless, the European perspective could be more emphasized in the curriculum regarding both content and structure. Hence, the University should try to close some gaps (e.g. workload, examination) in order to guarantee international applicability of the Romanian degree in other European countries. In this respect, the experts also want to draw attention to the process of recognizing externally achieved credit points. The University recognizes credits obtained at other universities if they comply with the regulations on students' professional activity; the equivalence of credits is evaluated by an internal credit recognition committee inside each faculty. From the experts' point of view, the recognition of credits transferred from other universities (national and international) should be regulated accord-

ing to the requirements of the Lisbon Recognition Convention, i.e. the burden of proof to demonstrate that an application does not fulfill the relevant requirements lies with the body undertaking the assessment³.

The “Applied Computer Sciences” study program contains 180+10 credits. The curriculum is comprised of 70 modules. The program is offered on a full-time basis (six semesters/three years).

The total workload of the program is 4,740 hours, which is divided into 2,150 contact hours, 112 hours of practical training and 2,426 hours of individual work.

From the experts’ point of view, the student workload should be evaluated on a regular basis in order to make sure that students are not overloaded or underchallenged. Additionally, the implementation of evaluation results to improve the study programs should be clearly documented. The experts also suggest combining smaller modules into larger units to emphasize competence orientation.

According to the University, the admission requirements are centralized within the University and, thus, no specific requirements are given for the bachelor study programs. General admission procedures are stated in the operational procedure “Methodology for Organization and Implementation of Admission”. The University assures to prioritize academic equality and enforcement of the ethics policies contained in the “Code of Ethics and Academic Integrity”, amongst others. By virtue of the “Regulation regarding the Evaluation and Assurance of Quality of Education in Bioterra” Chapter IX, students may apply for academic or social welfare scholarships in order to assure equality throughout the University.

Annual admissions are organized in two sessions during July and September. Foreign students must submit a Romanian language certificate (level C1), issued by institutions authorized by the Ministry of National Education. Appli-

³ (Art 3.3 (5)); Each Party shall recognize periods of study completed within the framework of a higher education program in another Party. This recognition shall comprise such periods of study towards the completion of a higher education program in the Party in which recognition is sought, unless substantial differences can be shown between the periods of study completed in another Party and the part of the higher education program which they would replace in the Party in which recognition is sought (Art.5.1 (1))

cants for the English-taught program will have to turn in a language certificate (level C1) for the English language.

From the experts' point of view, the admission procedure of the program complies with the requirements of the University as well as with the national standards. The general recruitment and admission policies for students of the University are clearly stated. The University makes it also clear that all discrimination is prohibited.

Based on the described conclusions, the expert group considers criterion B.1 to be partly fulfilled.

The recognition of credits transferred from other Universities (national and international) has to be regulated according to the requirements of the Lisbon Recognition Convention.

B.2. Learning outcomes

From the experts' point of view, the "Applied Computer Sciences" study program can be successfully classified within the Romanian higher education system. The final qualification gained by its graduates corresponds to the demands of the Romanian labor market. The knowledge, competencies and abilities gained throughout the study program correspond to the final academic certificate to be awarded. The practical activity, which has been described under criterion B.1, enables students to adapt to real life circumstances and to directly apply their theoretical knowledge.

Judging from the curriculum and the module descriptions, students completing the program obtain an overview on the subject of applied computer sciences. They obtain knowledge as well as explicative-interpretative, procedural/instrumental-applicative and attitudinal competencies to be used in various work environments, such as programming, IT-design, research, and teaching. Still, in the opinion of the experts, the European perspective could be more emphasized in the curriculum.

The teaching and didactic methods during contact hours are student-centered, focusing on a combination of lectures, interactive group discussions, creative critical analysis combined with current didactic technologies based on IT. From the experts' point of view, the mix between methods, as listed in the curriculum, could be improved, for example by including interactive learning

methods or group and project work. According to the University, the main responsibility of each course instructor is to apply student-centered methods of teaching and to create a productive learning environment. Furthermore, course instructors are responsible for the development of students' degree-specific as well as general competencies, which are specified in the course descriptions provided by the University.

The expert group is of the opinion that graduates of this program have a high chance of employability. They conclude that this positive outcome and development will on the one hand stem from the dedicated academic staff and on the other hand also from the open atmosphere and communication ethics at the University.

The expert group considers criterion B.2 to be fulfilled.

B.3. Scientific research activity

The research within the study program "Applied Computer Sciences" shall be carried out within national or international research projects, signed with internal or external beneficiaries. Results of student research are presented at the students' scientific events organized within the faculty, e.g. scientific sessions, student workshops, camps and study tours.

The experts conclude that research will be carried out by staff according to the "Research Plan". This is documented by the overview of publications. Validation criteria for research activities are provided. However, the number of peer-reviewed articles with impact factor as an indicator of high-quality research seems very low. In terms of further development opportunities, the experts recommend that the University finalizes the implementation of the research strategy already developed. Moreover, the research evaluation should be clearly documented. Staff at the faculties should strive for more public, international, and, ideally, peer-reviewed methods for disseminating their results.

The expert group also recommends that the University increases its research projects involving students. Very likely, this will positively affect the structure of students' independent study hours.

Considering these observations, the expert group regards criterion B.3. as fulfilled.

B.4. Financial activity

Currently, the financial resources of the University are primarily composed of own income, that is, tuition fees and financial support from the foundation. Nevertheless, it could also be helpful for a sustainable financing to consider other financial options besides relying on students' tuition fees (e.g. sponsoring, joint research projects, further education; *see also A.2*).

The University has confirmed in a formal declaration that they are "prepared and able to progressively ensure, for all years of study, the financial support necessary for the program to function in conditions that correspond to the standards of the Romanian program of studies".

Criterion B.4 is regarded as fulfilled.

C. Quality Management

C.1. Quality assurance strategies and procedures

The University has developed an elaborate quality assurance system implemented by means of corresponding evaluation procedures. The University presented its quality assurance system in the written documents.

The quality management system that was designed and implemented at "Bio-terra" University of Bucharest aims at fulfilling the requirements of the SR EN ISO 9001: 2008 Quality Management System standard. Furthermore, the principles of quality management at the University are in accordance with the ISO 9000: 2000 standard. The Coordination of the activities related to Quality Management within the University is carried out by the Quality Assurance Department, which includes the members of all faculties, students and graduates. This committee is subordinated to the competency commissions established at the faculty level and the study programs. The entire internal evaluation and quality assurance activity is based on the "Quality Evaluation and Quality Assurance Regulation" and Quality System Documents, specifying that the university policies are centered on quality and means of delivery, aiming at the implementation and application to promote a quality culture at all institutional levels.

With regard to the transparency of the quality assurance policies and developments, the University issues an annual report on the quality of educational

services in the University and proposes new measures to increase quality. This annual report is sent to the Senate.

The Commission for Quality Assessment consists of five members. These five members consist of four representatives of the teaching staff, of which one is the president, and one a student representative. The Commission collaborates with all departments and faculties of the University. It coordinates the application of quality assessment and quality assurance procedures and methodologies approved by the Senate of the University.

The University has an internal quality management system in which students take part; they are required to fill out course evaluations and provide feedback on the teaching performance. The results are processed by the Quality Assessment and Quality Assurance Committee, which then integrates the final recommendation into its report. The results of the teaching staff assessments are presented annually in the Senate where student representatives take part.

The experts suggest that the University attaches greater importance to the feedback of the evaluation results by the students (e.g. regarding workload). This is imperative for a functioning quality management system since this is the only way to verify the measures taken by the students. Correspondingly, the University could optimize its system in such a way that the feedback on the results is given regularly to all external and internal stakeholders.

With regard to the students' development of social responsibility and personal development in the course of studies, the University points out that it has its own University Ethics Code. The code lays down rules of conduct, ethics, and deontology for all members of the academic community of the University.

Considering the thorough implementation of the quality assurance system and the active participation of all University members in quality assurance procedures, the expert group concludes that criterion C.1 is fulfilled.

C.2. Procedures on the periodical initiation, monitoring and revision of the programs and activities carried out

The experts highlight that the quality management system is ensured by central and decentral commissions and a quality management department. The commissions act in accordance with the quality assurance strategy of the University. Moreover, a "Quality Manual" is approved by the Senate for each study year. Students assess all teaching staff regularly.

The University implements procedures of periodical revision and evaluation of the study programs offered. Hence, the teaching staff is required to conduct self-evaluations and peer-assessments annually, whereas students evaluate the teaching process every six months.

The experts conclude that the study programs are evaluated by different stakeholders on a regular basis by means of rational and effective methods.

The assessment of the teaching personnel is discussed in detail below, under criterion C.4.

The experts underline that the quality assurance system of the University enables productive application of the obtained teaching and learning evaluation results. This refers to the introduction of necessary corrective measures and better organization of the programs, as well as the improvement of teaching methods, envisaged in upcoming academic years. Nevertheless, the experts point out that the use of ISO standards bears the danger of over-bureaucratization. Therefore, the experts recommend re-considering this quality assurance approach.

Considering these facts, the experts conclude that criterion C.2 is fulfilled.

C.3. Objective and transparent procedures of learning results evaluation

Based on students' evaluations, the teaching process and the learning outcomes undergo a constant optimization process. Additionally, the University has established clear examination rules and a structured process for dealing with exceptional cases ("ECTS Implementation", "ECTS Application", "Organization License Exams/Diploma and Dissertation" and "Students with physical disabilities and chronic diseases"). Furthermore, the form of examination and the learning outcomes are clearly specified for each module.

In order to qualify for the final examination of a module, students must have met all subject requirements: attendance, passing the ongoing assessments and practical works. These are presented to the students by the lecture coordinator in the first-course lesson.

The final assessment in each course can be conducted in the form of a colloquium or an examination. Colloquiums are forms of oral examinations taken in, for example, optional courses.

Students' actions in case of appeal and re-examinations are well-defined and described in the regulations of the University. Hence, there are clear procedures established for the above-mentioned examinations and students are informed of these procedures in advance. The main function of examinations conducted in the program is to objectively evaluate students' achievement of the specific learning outcomes.

The experts sum up that criteria and regulations about grading are present (*see B.1 for details*). The forms of examinations generally fit the competence aimed for by the study program and the modules. The evaluation of learning outcomes is, thus, appropriate.

Taking the above-described facts into account, the expert group concludes that criterion C.3 is fulfilled.

C.4. Periodical evaluation procedures of teaching staff quality

The University has provided an overview about the teaching staff of the study program.

20 teachers are involved in the program: two professors, five associate professors, nine lecturers, three senior researchers, and one university assistant. Among the teaching staff is the dean of the Faculty who is also the coordinator of the program. The staff/student ratio for the academic year 2019/2020 has been calculated as 1/6 (20 teachers/120 students). Additional human resources include: Department Director, Secretary, Accountant, Cashier, Administrator, HR Inspector, Librarian, and Computer Scientist.

With the curriculum of the Bachelor study program "Applied Computer Sciences" in mind, the ratio between professors and lecturers appears to be balanced, despite the fact that according to the plans professors are not dominant in lectures. Overall, the teaching and academic staff of the University shows a high level of commitment for the execution and further development of the study program. Still, from the experts' point of view, it is desirable to increase the percentage of professors in the program. Furthermore, concerning the English track of the study program, the University has to prove that the English language skills of the staff are adequate to ensure the teaching quality of the program.

The experts take note that all teaching positions are established in compliance with the requirements of legal norms and completed with tenured teaching staff in higher education in accordance with the Romanian law.

Teachers' performance is evaluated at the University every year by a third party. Mutual respect is assured, and confidentiality is guaranteed between the rector, dean and the evaluated teacher. The results of these annual evaluations serve as the basis for promotion proposals. The selection and employment of teaching staff are based on the principle of public contest; these procedures are regulated by the University's "Contest Methodology for the occupation of teaching and research positions" as well as by the Romanian legal requirements (Law of National Education no.1/2011, Government Decision no.457/2011, Government Decision no.36/2013, Order no.6560/2012, Order no. 4204/2013). According to these regulations, teaching and other positions are publicly announced and the University chooses candidates for these positions based on an open and independent procedure. These procedures are transparent and available for potential candidates from the academic as well as from the work field. By means of such transparent contest regulations, the University seeks to strengthen its competitiveness together with its national and international visibility.

The teaching staff is periodically evaluated by means of both peer and anonymous student reviews. Student evaluations are performed at the end of each semester. They are anonymous, which encourages an objective assessment. The results of the reviews are processed by the Quality assessment and Quality Assurance Committee. Students are informed about the results of the evaluations through their student representatives in the Senate. Should a member of the teaching staff receive an unsatisfactory evaluation result, a course of actions will be implemented in order to eliminate the existing problems. Hence, the results are carefully monitored, and the improvements are continuously observed.

Based on these facts, the expert group considers criterion C.4 to be partly fulfilled.

Concerning the English track of the study program, the University has to prove that the English language skills of the staff are adequate to ensure the teaching quality of the program.

C.5. Learning resources accessibility

Overall, the experts conclude that the University offers appropriate facilities of sufficient number and good quality for the execution of its currently running study programs. The students have access to the main University Library from Monday to Friday between 08:00 a.m. to 06.00 or 07:00 p.m.

After visiting the library, the experts discerned that the program-specific literature for the “Applied Computer Sciences” program could be enhanced. The experts urge the University to significantly expand the library in terms of printed and electronic books, journals and databases and recommend to use open access resources for teaching (*see also A.2*).

The University encourages students’ learning processes by offering resources and opportunities for extra-curricular activities. Moreover, the University offers various forms of academic support and counselling to students: consultations and tutorials. However, regarding infrastructure, accessibility for people with a disability should be improved. Additionally, the experts urge the University to enhance its lecture halls and other facilities in terms of working safety (e.g. remove loose power outlets, secure easy access to all rooms, etc. ...). The safety of students and staff should be ensured at all times.

The expert group considers criterion C.5. as partly fulfilled.

Program-specific literature should be expanded.

C.6. Systematically updated data base, with regard to the internal quality assurance

The University has designed an internal quality assurance system and established structures for monitoring and developing the quality assurance concept. Parts of the internal quality assurance system are regular peer and students’ reviews, as well as the feedback meetings organized for this purpose. A more detailed description can be found under criteria C.3. and C.4. A regular track of the evaluation and review results is maintained by the University. Strategies for improvement are designed therefrom. A corresponding electronic system and database are also implemented. The experts conclude that the data and information policy seem to be adequate at the University.

The expert group considers criterion C.6. as fulfilled.

C.7. Transparency of public interest information concerning study programs

The results of quality assurance activities are summarized in a report, in order to improve the “Applied Computer Sciences” programs’ quality.

Through its website, the University supplies relevant information concerning its programs and its structures to the public. Thus, the University promotes its study programs online, through local printed media, and by running open days and workshops at high-schools and other institutions. Nevertheless, in light of internationalization, the experts urge the University to offer an English version of its website. This can help to improve visibility and the promotion of English-speaking study programs and, thus, potentially counter the decreasing number of students.

The experts conclude that the University provides information on qualifications, study programs, diplomas, teaching and research staff, student facilities and other aspects. The website should be revised though in order to offer the latest and relevant information.

All in all, the expert group considers criterion C.7 to be fulfilled.

C.8. Functionality of education quality assurance structures, according to the law

The expert group was provided with an overview of the quality evaluation mechanisms and institutional structures. The Quality Management Commission regularly elaborates and reviews all corresponding policies and strategies as well as operational procedures. The expert group is convinced of the validity of the information provided in the application documentation, and its accordance with the legal framework, as stated in the “Quality Manual”. Quality assurance and evaluation for the currently running programs is well developed at the University.

Structured processes and an evaluated organization underline the importance of the quality management at the University; the organization strives for continuous improvement. Central and decentral staff are involved in the quality assurance process. The experts conclude that the institutional structure for quality education seems to be adequate. Thus, criterion C.8 is considered to be fulfilled.

For more details on the structure, functioning and members involved in the Quality assurance procedures at the University see also criteria A.1, A.2 and C.1.

4 Evaluation Summary

The main task of the expert group during the peer review was to assess the planned “Applied Computer Sciences” study program and to verify its compliance with European and Romanian regulations (*see part 1 Introduction*).

In the view of the expert group, the “Applied Computer Sciences” study program complies with Romanian regulations as specified in the “Methodology” and the “Law of National Education”. Hence, the study program complies with the pertinent Romanian conventions as well as with all legal normative requirements.

The expert group acknowledges the high motivation and engagement of all persons to be involved in the program. However, in particular the field of information technologies, which is marked by fast-paced progress, the experts emphatically highlight the relevance of up-to-date hard and software as well as the application of current literature.

In addition, it became apparent to the experts that the University has to close some gaps in order to guarantee international applicability of the Romanian degree in other European countries. Hence, the experts encourage the University to use the academic freedom wherever possible, to sharpen its profile and strategy as well as adhere to European standards, striving to become relevant in an international context by defining its unique selling point.

The on-site visit in addition to the documentation provided by the University, enable the expert group to recommend the provisional authorization of the “Applied Computer Sciences” study program offered by “Bioterra” University of Bucharest, to the Accreditation Commission of the AHPGS.

Given the fact that the program meets all normative requirements and standards listed in the performance indicators determined by the Romanian national quality assurance agency, the expert group recommends the provisional authorization of the “Applied Computer Sciences” study program also by the Romanian Ministry of National Education.

The experts outline the following conditions:

- The University has to provide students of “Applied Computer Sciences” with a wider range of databases as well as learning and scientific material. (A.2)

- The recognition of credits transferred from other universities (domestic and abroad) has to be regulated according to the requirements of the Lisbon Recognition Convention. (B.1)
- Concerning the English track of the study program, the University has to prove that the English language skills of the staff are adequate to ensure the teaching quality of the program. (C.4)

At the same time, the experts attempt to provide constructive feedback and recommendations for further improvement regarding the concept, structure and content of the program.

The following recommendations are thus proposed for the University's consideration:

A) Institutional Capacity:

- The University should look for common interests between the faculties and, thus, combine forces and resources. (A.1)
- The division of the hierarchical units and their functions within the University should be made clearer in order to promote transparency. (A.1)
- The University should enhance its lecture halls and other facilities, in particular laboratories in terms of working safety (e.g. remove loose power outlets, secure easy access to all rooms, etc (A.1)
- Internationalization measures should be presented in a more open and distinct manner so that, apart from maintaining its significant role in Bucharest and its surroundings, it promotes its attractiveness (e.g. setting up more English-taught programs, partnerships with foreign universities, summer schools). (A.1, A.2)
- Publically accessible resources that are free of charge, such as the Institute for Electrical and Electronics Engineers (IEEE), Massive Open Online Courses (MOOC) or W3L should be integrated in the study program. (A.2)
- The University library could establish partnerships with similar institutions (libraries, publishing houses) within the country and abroad, in order to provide students and teachers with access to a wider range of IT

resources, databases as well as learning and scientific material, especially for the new programs. (A.2)

- Offering the current study programs also in English in order to attract not only Romanian but also foreign students and, thus, counter the decreasing number of students. (A.2)

B) Educational Effectiveness:

- Academic freedom should be used wherever possible, especially within the preset modules, to sharpen its profile and strategy as well as to adhere to European standards, striving to become relevant in an international context by defining its unique selling point. (B.1)
- The University should try to collaborate with international employers to offer the students perspective and various possibilities for practical training. (B.1)
- There should be more mandatory practical trainings in the curriculum. (B.1)
- Interdisciplinarity among the study programs should be increased wherever possible to use synergies, e.g. when communicating research methods. (B.1)
- Competences with regard to scientific research, e.g. skills in the collection and filtering of information should be part of the curriculum. (B.1)
- Collaborations with the private IT-sector should be established in order to provide students with internships and in order to be in a constant exchange process with the industry. (B.1)
- The integration of the research conducted by the teaching staff could be more transparent in the curriculum.
- Research methods could be used to assist other faculties, e.g. by way of an evaluation of data or the development/implementation of software.

- Written exams should be located in the first year of studies. In higher semesters, oral exams and more project work should be applied. All exams should be competence-oriented, thus multiple-choice tests should be reduced if not discarded in general. (B.1)
- Obligatory credits to be awarded for the final exam should be part of the workload of the study program. (B.1)
- Focusing on competence orientation, modules should be combined into larger units and the student workload should be evaluated on a regular basis. (B.1)
- An overall research strategy with goals and means of the faculty or institution with strategic considerations about a coherent research policy and research topics based on long-term considerations should be developed. Moreover, the evaluation of research should be documented. Research activities among students could be increased. (B.3)

C) Quality Management:

- The University should attach greater importance to the feedback on the evaluation results by the students and all stakeholder involved (e.g. regarding workload, giving feedback to external and internal stakeholders). (C.1)
- The use of ISO standards bears the danger of over-bureaucratization and could, therefore, be reviewed. (C.2)
- The percentage of professors teaching in the program should be increased. (C.4)
- Regarding infrastructure, the accessibility for people with a disability should be improved. (C.5)
- The website should also be offered in English in order to improve visibility and promotion of English speaking study programs. (C.7)

5 Decision

Decision of the accreditation commission of the 25 June 2019

The proposed resolution of the Accreditation Commission of the AHPGS is based on the University's application, as well as the expert review and the on-site visit described in the Expert Report.

The on-site visit of the University took place on January 24-26, 2019 according to the previously agreed schedule.

The accreditation decision is based on the Expert Report. The Expert Report, i.e. the proceedings of the Provisional Authorization Process conform to the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) as well as to the Law no. 1 of National Education of Romania, 2011, Art.150, and Art.193; the Quality Evaluation Activities Guide for University Study Programs and for Higher Education Institutions: Part 1 Study Programs Accreditation External Evaluation Guide, and the Methodology for External Evaluation, Standards, Standards of Reference, and List of Performance Indicators of the Romanian Agency for Quality Assurance in Higher Education.

The Accreditation Commission of the AHPGS discussed the procedural documents and the recommendation of the expert group.

The standard study period in the full-time program "Applied Computer Sciences" is three years/six semesters. The study program encompasses 180 CP and comprises 70 mandatory modules of which 58 are obligatory and twelve are optional, i.e. there is a choice between these modules. The bachelor program "Applied Computer Sciences" is completed with the conferral of the academic degree "Bachelor of Applied Computer Sciences". It is offered in Bucharest and in Buzau. In Bucharest, the University offers 120 study places for the study program in English and 60 study places for the study program in Romanian. In Buzau the University offers 60 study places for the study program in Romanian.

The Accreditation Commission of the AHPGS considers that most Criteria (according to the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) as well as to the Law no. 1 of National Education of Romania, 2011, Art.150, and Art.193; the Quality

Evaluation Activities Guide for University Study Programs and for Higher Education Institutions: Part 1 Study Programs Accreditation External Evaluation Guide, and the Methodology for External Evaluation, Standards, Standards of Reference, and List of Performance Indicators of the Romanian Agency for Quality Assurance in Higher Education) are fulfilled and therefore adopts the following decision:

The study program “Applied Computer Sciences” is recommended to obtain provisional authorization at the study sites in Buzau and Bucharest.

Based on the Expert Report, the Accreditation Commission outlines the following conditions:

- The University has to provide students of “Applied Computer Sciences” with a wider range of databases as well as learning and scientific material. (A.2)
- The recognition of credits transferred from other universities (domestic and abroad) has to be regulated according to the requirements of the Lisbon Recognition Convention. (B.1)
- Concerning the English track of the study program, the University has to prove that the English language skills of the staff are adequate to ensure the teaching quality of the program. (C.4)

For the further development and enhancement of the study program and the University as a whole, the Accreditation Commission of the AHPGS supports the recommendations articulated in the Expert Report.