



Doc. 300.1.2

Date: 08/07/2024

## Higher Education Institution's Response

- **Higher Education Institution:**  
Frederick University
- **Town:** Nicosia
- **Programme of study**  
Name (Duration, ECTS, Cycle)

**In Greek:**

Εφαρμοσμένες Βιοιατρικές Επιστήμες (4 ακαδημαϊκά έτη, 240 ECTS, Πτυχίο (BSc))

**In English:**

Applied Biomedical Sciences (4 academic years, 240 ECTS, Bachelor of Science (BSc))

- **Language(s) of instruction:** English and Greek
- **Programme's status:** New
- **Concentrations (if any):**

**In Greek:** Concentrations

**In English:** Concentrations



**The present document has been prepared within the framework of the authority and competencies of the Cyprus Agency of Quality Assurance and Accreditation in Higher Education, according to the provisions of the “Quality Assurance and Accreditation of Higher Education and the Establishment and Operation of an Agency on Related Matters Laws” of 2015 to 2021 [L.136(I)/2015 – L.132(I)/2021].**

## A. Guidelines on content and structure of the report

- *The Higher Education Institution (HEI) based on the External Evaluation Committee's (EEC's) evaluation report (Doc.300.1.1 or 300.1.1/1 or 300.1.1/2 or 300.1.1/3 or 300.1.1/4) must justify whether actions have been taken in improving the quality of the programme of study in each assessment area. The answers' documentation should be brief and accurate and supported by the relevant documentation. Referral to annexes should be made only when necessary.*
- *In particular, under each assessment area and by using the 2<sup>nd</sup> column of each table, the HEI must respond on the following:*
  - *the areas of improvement and recommendations of the EEC*
  - *the conclusions and final remarks noted by the EEC*
- *The institution should respond to the EEC comments, in the designated area next each comment. The comments of the EEC should be copied from the EEC report **without any interference** in the content.*
- *In case of annexes, those should be attached and sent on separate document(s). Each document should be in \*.pdf format and named as annex1, annex2, etc.*

**1. Study programme and study programme’s design and development**  
 (ESG 1.1, 1.2, 1.7, 1.8, 1.9)

Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
<p>a) Although the study programme remains current and consistent with developments in society and science, the EEC believes that further improvements can be made to include modern concepts in biomedicine, including course topics like human microbiome and its implications, bioinformatics, big data and health (which would go well with the precision medicine course planned), and proactive aging and related regenerative medicine.</p>	<p>We accept and adopt the EEC recommendation to include more Scientific subject matter in the courses. More topics on the human microbiome, proactive aging and regenerative medicine, have been included in the course Precision Medicine/ Biomarkers code ABS404, which has been revised accordingly. Please refer to Annex 1 – Updated Course Descriptions and Annex 2 – Course Distribution.</p>	<p>Choose level of compliance:</p>
<p>b) The committee also noted a total absence of information regarding the use of animal models in biomedical sciences and the absence of animal facilities as well. This is clearly something that a biomedical scientist, applied or not, should be well informed about.</p>	<p>We acknowledge the importance of including information on the use of animal models in biomedical sciences. To address this need It is noted that Frederick University has a long-standing signed agreement of collaboration with the Cyprus Institute of Neurology and Genetics, which is the only organisation in Cyprus that operates an animal house. This is a National Infrastructure facility which provides access to all research Institutions for creating, maintaining and providing transgenic mice for the Cypriot Scientific and Research Community. This agreement between Frederick University and The Cyprus Institute of Neurology and Genetics, grants our students and faculty access to state-of-the-art animal facilities, ensuring that they receive the necessary training and exposure to animal models in biomedical research. Additionally, we have revised the laboratory exercises in the courses ABS404 and ABS403. These revised exercises will be performed at the aforementioned</p>	<p>Choose level of compliance:</p>

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	<p>animal house, providing our students with hands-on experience and aligning our curriculum with best practices in biomedical education. (Please refer to Annex 1 – Course Descriptions).</p>	
<p>c) The programme includes practical placements. The EEC suggests that reinforcing placements in laboratories that give opportunities for research will result in further improvement of the curriculum. Moreover, long-term and binding agreements should be in place with the external stakeholders, detailing the placement of the students, and agreements on training and supervision.</p>	<p>We appreciate the risk associated with relying on third parties/ collaborating stakeholders for hosting the ABS students. As already discussed during the onsite visit, the collaborating Clinical Laboratories have a vested interest to work with the university as this will have many direct and indirect benefits, such as:</p> <ul style="list-style-type: none"> <li>• Will get to know the ABS candidates and can hire the best emerging talents.</li> <li>• Have a direct say in shaping both the academic course content as well as the professional skills to be acquired based on their needs.</li> <li>• Can participate in collaborative research programs and improve both their academic and research standing in the society.</li> <li>• Can expose their work in National and International Conferences, via the presentation of students' thesis work, thus increasing their brand.</li> </ul> <p>Additionally, MoU's have been prepared with all involved external partners where:</p> <ul style="list-style-type: none"> <li>• The duties and responsibilities of each party: including their obligation to host the ABS students, as well as participate actively in the mentorship programs are clearly indicated.☐</li> </ul>	<p>Choose level of compliance:</p>

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	<ul style="list-style-type: none"> <li>• Commitments to providing appropriate training and supervision during the placements are stipulated, guaranteeing that students receive the necessary support and guidance.</li> <li>• Health and Safety Procedures.</li> </ul> <p>Please find attached (Annex 03 – MoU) the planned MoU with one of the stakeholders. Upon successful accreditation and before the operation of the programme, the MoU’s with the rest of the partners will be finalized.</p>	
<p>d) The programme should release an Annual Quality Report registering main findings in quality indicators.</p>	<p>As shown during the onsite visit, the programme will implement the Quality Assurance procedures that the University follows. As a rule, after the end of each academic year, the Coordinator of the Program completes the Program Self Evaluation (IQC104) report which includes quality indicators related to the program (structure, content, etc.), the students (assessment, progress, etc.), and the graduates (employability, degree grades, duration of studies, etc.). This report also utilizes data and information obtained through the Student Course Evaluation (IQC100) questionnaires, the Faculty Course Evaluation report (IQC101), as well as comments and suggestions made by the focus groups (students, graduates and employers). The Program Self Evaluation also reports on the action taken, related to the Program, with respect to the implementation of the Departments Action Plan agreed between the Department and the Internal Quality Committee.</p> <p>The Program Self Evaluation report is submitted to the Council of the</p>	<p>Choose level of compliance:</p>

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	<p>Department and is part of the Department's Self Evaluation Report (IQC107), which is submitted to the Internal Quality Committee of the University. The suggestions of the Department and the Internal Quality Committee are reported in the Action Plan of the Department, which also includes agreed actions and measures that aim towards the upgrade and improvement of the Program. The implementation of this action plan is reported in the relevant reports (quality reports of the following academic year) and is monitored by the Departmental Quality Committee, while it is also checked by the Internal Quality Committee of the University.</p>	
<p>e) The academic staff has to take advantage of the future collaborations between the programme and foreign Institutions to identify potential high-level Visiting Professors from the field of Advanced Biomedical Sciences.</p>	<p>We agree with the EEC that high level visiting professors can enrich the programme with their specialized knowledge and expertise.          For that reason, the Department has agreed with:</p> <ul style="list-style-type: none"> <li>• <b>Professor Theo Luider</b>, Head of Laboratory Neuro-Oncology/ Clinical and Cancer Proteomics, Department of Neurology, Erasmus Medical Centre. Email: <a href="mailto:t.luider@erasmusmc.nl">t.luider@erasmusmc.nl</a></li> <li>• <b>Christopher W. Sutton, PhD</b>, Reader in Biochemistry, Director of Proteomics Facility Institute of Cancer Therapeutics, University of Bradford  <a href="mailto:C.W.Sutton@bradford.ac.uk">C.W.Sutton@bradford.ac.uk</a></li> <li>• <b>Professor Drakoulis Yannoukakos PhD, ErCLG</b> Director of Research European Clinical Laboratory Geneticist (ErCLG), Laboratory of Human Molecular Genetics, I NRASTES National Centre for Scientific Research NCSR "Demokritos" email:</li> </ul>	<p>Choose level of compliance:</p>

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY
	<p><a href="mailto:yannouka@rrp.demokritos.gr">yannouka@rrp.demokritos.gr</a> / <a href="mailto:yannouka@gmail.com">yannouka@gmail.com</a></p> <p>The above external experts/Consultants will deliver lectures on specialised cutting-edge topics on Advanced Biomedical Sciences, such as proteomics and biomarker discovery as well as on cancer susceptibility genes, precision medicine and targeted therapies.</p>	
<p>f) The establishment of a well organised alumni society will provide longitudinal information for the career and employment path of the student's post-graduation, which is a pivotal quality index for any academic programme.</p>	<p>The establishment of an Alumni Association has already been recognized by the Department as an important parameter for its development. As the programme under evaluation is a new one with no existing alumni, the Department has already initiated a formal dialogue with its alumni from other programmes. To further strengthen this dialogue the Department has organized, with the support of the University, social gatherings of its alumni, through which the establishment of a nucleus for the creation of a Central Council of an Alumni Association was pursued. Further actions are anticipated in the forthcoming months by the identified alumni. The Department remains at the availability of the interested alumni to foster the process that has been initiated.</p>	<p>Choose level of compliance:</p>



## 2. Student – centred learning, teaching and assessment (ESG 1.3)

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<p><b>Process of teaching and learning and student-centred teaching methodology</b></p> <p>a) The current programme offers limited training in bioinformatics, with an introductory Bioinformatics course offered only as one of the 7 electives. While the teaching staff indicated that several other courses also incorporate bioinformatics components, the EEC recommends to expand this extensively. Bioinformatics enables the analysis and interpretation of vast biological datasets, providing critical insights into complex biological processes, disease mechanisms, and potential therapeutic targets at a molecular level. It also connects very well to the course on Precision Medicine. To address this, the EEC strongly recommends making a Bioinformatics course mandatory, and providing introductory programming in R and Python. Proficiency in bioinformatics is vital for handling the increasingly prevalent large omics datasets in biomedical research of tomorrow.</p>	<p>We accept and adopt the recommendation. The course ABS409 – Introduction to Bioinformatics is compulsory in the 7th academic semester. Introductory programming in R is also added in the course description, where the students will learn and implement it during their theory sessions and their laboratory sessions. In addition, realizing the major impact and key significance of Bioinformatics, the University is committed to invest and expand the course /lectures on Bioinformatics, by collaborating with other Cypriot reputable organisations in research, such as the Cyprus Institute of Neurology and Genetics as well as the Karaiskakion Foundation            Please refer to Annex 01 – Course Descriptions and Annex 02 – Course Distribution.</p>	<p>Choose level of compliance:</p>
<p>b) Additionally, the programme currently focuses solely on biomedical topics and clinical diagnosis, assuming graduates will predominantly enter careers in Clinical Laboratories. However, this narrow focus overlooks potential opportunities in other sectors of industry or entrepreneurship.</p>	<p>We accept the EEC recommendation and acknowledge the importance of broadening the scope of our programme to encompass opportunities beyond clinical laboratories and to foster entrepreneurial skills among our graduates. In response to your recommendation, we have</p>	<p>Choose level of compliance:</p>

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<p>Therefore, the EEC recommends introducing courses that cover the business and applied aspects of applied biomedical sciences. Topics such as entrepreneurship, starting a spin-off company (or why not “your own clinical laboratory”?), and intellectual property rights are crucial for translating research innovations into practical applications, fostering innovation, and equipping students to navigate the business aspects of biomedical industries effectively.</p>	<p>introduced two new elective courses to the curriculum:</p> <ul style="list-style-type: none"> <li>• <b>ABS414 – Entrepreneurship Theory in Biomedical Sciences:</b> This elective course covers essential concepts of entrepreneurship, including the process of starting and managing a business, identifying market opportunities, and developing business plans. It aims to equip students with the knowledge and skills needed to launch and sustain successful ventures, including their own clinical laboratories.</li> <li>• <b>ABS415 – Innovation Studies:</b> This elective course focuses on the principles and practices of innovation in the biomedical field. It includes topics such as intellectual property rights, technology transfer, and the commercialization of research innovations. The course is designed to help students understand how to translate scientific discoveries into practical applications and navigate the business aspects of the biomedical industry effectively.</li> </ul> <p>Please refer to Annex 01 – Course Descriptions.</p>	
<p>c) The Applied Biomedical Sciences programme will be offered in two languages: Greek and English. This presents challenges regarding teaching staff availability and workload. Delivering all courses in both languages could significantly increase the teaching burden of the teaching staff. Moreover, offering the programme in Greek and English poses</p>	<p>As already discussed with the Committee the aim of the University is to offer a high-quality program on Applied Biomedical Sciences (ABS) which generates the Scientists of today and tomorrow, thus attracting the attention of students. Indeed, there is a prediction that the demand for graduates in ABS, is not only increasing in Cyprus, but globally is predicted that the demand for graduates in the Health</p>	<p>Choose level of compliance:</p>

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<p>challenges in recruitment of teachers, as they need to be proficient in both languages. Currently, all faculty members are from Cyprus or Greece. To ensure a robust English programme, it is recommended to also recruit teachers from other countries. It is important to have international teachers in an English training program, because they bring diverse perspectives, cultural insights, and global academic standards, enriching the learning experience.</p>	<p>Sciences will rise. Having these data in mind at the outset the intention is to offer the program in both languages, Greek and English to gauge the response. Based on the students' interest, the University has the experience, capacity and resources to respond to their needs and tailor the program accordingly.</p> <p>To address the potential challenges of delivering the programme in both Greek and English, we have decided to initially offer the programme in Greek for the first cohort intakes. This approach will allow us to identify and address any weaknesses or areas needing improvement before expanding the programme to include English. By starting in Greek, we can ensure the quality and effectiveness of the curriculum and make necessary adjustments based on initial feedback and performance.</p> <p>Furthermore, as mentioned in our response to point 1e, our University is already in close collaboration with well-established international scientists to further enhance the existing academic staff. These collaborations provide us with access to a diverse pool of expertise and international perspectives. When we expand the programme to English, we plan to leverage these collaborations to further recruit teaching staff from other countries. This will enrich our programme by bringing diverse perspectives, cultural insights, and global academic standards, thereby enhancing the learning experience for our students.</p>	
<p><b>2.2 Practical training</b>            d) A key element of the training programme is the placement of the students at the Clinical Laboratories in course ABS306. However, this relies on the</p>	<p>We would like to thank the EEC for their comment. In our effort to secure the commitment of our external stakeholders to host students in their laboratories we have developed MoUs that the</p>	<p>Choose level of compliance:</p>

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<p>continued commitment of these external stakeholders to host these interns in their laboratories. Furthermore, the staff at these institutions may not have sufficient experience in supervising, training and assessing students. Therefore, the EEC strongly recommends establishing binding, long-term agreements with these stakeholders. These agreements should outline the allocation of students, specify the number of students involved, and detail arrangements for training and supervision. To prepare for contingencies, a strategy needs to be developed in case a stakeholder decides to withdraw from the programme. Additionally, the current allocation of students for the BMS306 course is currently unclear.</p>	<p>stakeholders will sign at the beginning of the program. In the MoUs agreements it is mentioned that the stakeholders can withdraw from the program under specific conditions and after informing in advance of their intention, so as it does not affect the operation of the program (see also the Department's response in point 1c).</p> <p>The ABS306 course and the Practical Training Guide (Annex 04) have been revised, to include details about students' placements. Their allocation will be planned, and specific number of students will be accommodated in the stakeholders following a rotation plan covering the four main disciplines of routine work in clinical laboratories and research experience.</p>	
<p>e) For research activities at the External Stakeholders, the students must travel to laboratories off campus. Clarification is needed regarding transportation arrangements for these visits.</p>	<p>The furthest stakeholder facility is located at ~7km away from the University Campus. Although traveling to the facilities can be done with the use of the private car of the students, public transportation is also a hassle-free solution as there are direct bus lines going from the University campus near the stakeholders' facilities.</p>	<p>Choose level of compliance:</p>
<p>f) Additionally, it is highly recommended to provide mandatory training for supervisors at external stakeholders in teaching skills and assessment. This training will ensure that supervisors are well-equipped to support and evaluate students effectively during their placements and harmonize the training and assessment among the different stakeholders.</p>	<p>As mentioned in the Practical Training Guide (Annex 04) there are criteria for selecting mentors from the external stakeholders. Examples of the mentor and student assessment forms are provided in the Practical Training guide.</p> <p>The Personal and Professional Development Center at Frederick University (P<sup>2</sup>DF) is responsible for the training and improvement of programmes offered to all faculty members. The Centre aims to</p>	<p>Choose level of compliance:</p>

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	<p>provide a range of development opportunities for faculty and staff that will enable them to enhance their professional and personal skills and ultimately improve the quality of our programmes.</p> <p>Given our academic environment, personal and professional development activities can take the form of training opportunities, both supply and demand-driven (workshops, seminars, informal discussions, Teaching and Learning Day), mentoring programs, service opportunities (Active Citizenship) to maximise interaction and active participation.</p> <p>As of 2022, the P<sup>2</sup>DF Center has developed and implemented the <a href="#">‘Rule for Staff Training’</a> to ensure its smooth operation.</p> <p>Finally, <a href="#">here</a> you can find examples of the trainings for the current academic year. For all our past trainings, <a href="#">here</a> you can find resources such as recordings, presentations, links and helpful material.</p> <p>Furthermore, in the MoUs with our external stakeholders, there is a clear agreement that these mentors will participate in the necessary training. This ensures proper training and assessment, harmonizing the educational experience for our students across different placements. Examples of the mentor and student assessment forms are provided in the Practical Training Guide (Annex 04), demonstrating our commitment to structured and effective evaluation processes.</p>	
g) A risk is that the number of students that will enroll in the new Applied Biomedical Sciences programme is	We appreciate the External Evaluation Committee's concern regarding the enrolment uncertainty for the new Applied Biomedical	Choose level of compliance:

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<p>uncertain. It is aimed for 30 to 50 students. In case of an unexpectedly low or high number of students, the programme needs to be adjusted accordingly, which will pose risks for scheduling and resource allocation, especially for the practical training. Of course, this is a risk with any new educational programme. However, this risk is increased by offering the programme in two languages.</p>	<p>Sciences programme. During the design of the programme, we have implemented several strategies to mitigate the risks associated with both low and high student enrolment, ensuring the programme remains robust and adaptable:</p> <ol style="list-style-type: none"> <li>1. Minimum audience to offer the programme is 8 students, as per the relevant guidelines by <a href="#">CYQAA</a>. The University applies a monitoring system to track enrolments and make data-driven decisions. This includes regular reviews and adjustments to marketing strategies and resource allocation.</li> <li>2. During the design of the programme, resource allocation planning has been made for 2 cohorts (~60 students) for the first years of the programme's operation. The infrastructure in place and the agreements for practical placement/internships are more than capable to ensure the smooth operation of the programme. Of course, the process is dynamic and in-case of higher numbers than the initial planning, applications can be rejected as per the admission criteria set.</li> <li>3. We have secured agreements with our industry partners and affiliated laboratories to provide scalable resource allocation. This means that we can increase or decrease the availability of practical training sessions and</li> </ol>	

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	<p>laboratory spaces based on student numbers without compromising the quality of education.</p> <p>4. The University has established comprehensive language support services, including language labs and tutoring, to assist students who may need additional help with either language. This ensures that students can fully engage with the programme content in their preferred language.</p> <p>These measures collectively ensure that our programme can effectively manage the uncertainties in student enrolment, providing a high-quality educational experience for all students while maintaining efficient use of resources.</p>	
<p><b>2.3 Student assessment</b></p> <p>h) Regarding student assessment, the committee has no specific recommendations, except that it should be mentioned clearly in the course descriptions how the individual learning objectives are assessed to avoid that specific points are incompletely or even not at all included.</p>	<p>We would like to thank the EEC for the suggestion, and we accept their remark. Course outlines and course descriptions are revised so that all individual learning objectives are included and clearly assessed. Please refer to Annex 01 – Course Descriptions.</p>	<p>Choose level of compliance:</p>

### 3. Teaching staff (ESG 1.5)

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<p>Overall, the teacher situation for this planned B.Sc. programme appears to be under control already, as can be deduced from the above “findings” and “strengths” sections. However, further improvement in general is certainly possible and is in essence the purpose of this inspection. Accordingly, the EEC has identified a few areas that could improve the situation for the teaching staff, and thereby for the students. Most of the background for these areas can be found in the Findings sections C3.1-3.3 above (and sections C1 and 2 regarding bioinformatics) so the below will focus mainly on the recommendations regarding teaching staff.</p> <p><b>3.1 Teaching staff recruitment and development</b></p> <p>a) * A clearer system for how to follow up and award competence development within the pedagogic field should be considered in order to encourage systematic and continuous improvement of teaching for the students.</p> <p>* Create incentives to test and implement new pedagogic models in the B.Sc. programme. This also has the potential to lead to scientific publications within the field of pedagogic development in biomedical education.</p>	<p>We appreciate the External Evaluation Committee's recommendations to enhance pedagogic development and encourage innovation within our B.Sc. in Applied Biomedical Sciences programme.</p> <ol style="list-style-type: none"> <li>1. As part of the continuous learning opportunities in the University, we have established a series of ongoing workshops and seminars dedicated to pedagogic development. Topics include innovative teaching methods, assessment techniques, and technology integration. Faculty participation in these workshops is tracked and considered during evaluations. Please refer to answer 2f for the training.</li> <li>2. Faculty members who complete a series of workshops or a comprehensive course on teaching methods will receive a certification, which will be recognized in their promotion and review processes.</li> <li>3. As part of their evaluation and promotion process, faculty members are encouraged to maintain a teaching portfolio that documents their pedagogic activities, innovations, and reflections on their teaching practices. This portfolio serves as a valuable resource during evaluations and provides a structured way to showcase ongoing development. Additionally, as per the internal quality assurance processes at the end of each academic year the faculty members complete</li> </ol>	<p>Choose level of compliance:</p>



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	<p>the IQC 105 – Faculty Activity report, where evaluation takes place (self evaluation and student evaluation) on courses taught, teaching methodologies, research activities etc. This report is part of their biyearly evaluation by the Head of the Department and the Dean of the School as well as part of their portfolio when applying for promotions.</p> <p>4. We have established annual awards to recognize faculty members who have successfully implemented innovative pedagogic models.  <a href="#">The Michael Frederickou Teaching Excellence Awards</a> include a financial bonus and public recognition at faculty meetings and university events.</p> <p>5. Faculty members who engage in pedagogic research are supported in publishing their findings in academic journals and presenting at conferences. We have also created internal platforms, such as seminars and newsletters, to share successful pedagogic innovations within the university.</p> <p>By implementing these measures, we aim to foster a culture of continuous pedagogic improvement and innovation within the BSc in Applied Biomedical Sciences programme. These steps ensure that our faculty are supported in their development as educators and that our students benefit from cutting-edge teaching methods and a dynamic learning environment.</p>	
<p>b) *For teaching the Programme in the English language, it is highly recommended to recruit</p>	<p>Please refer to previous response 1e.</p>	<p>Choose level of compliance:</p>

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teaching staff from outside Cyprus or Greece, because this would bring diverse perspectives, enhance the program's global relevance, and ensure a high level of proficiency in English instruction.		
c) 3.c. *Going forward and in order to future-proof the programme as well as the academic staff, hiring of a dedicated bioinformatics teacher should be considered as this topic needs to be expanded to meet the requirements on biomedical scientists of the future. If this is not possible financially or due to competition (since this competence is much sought after today), a visiting staff arrangement could be possible across the Schools or from staff at the Karaiskakio Foundation.	We thank the EEC for raising this issue with which we fully agree. The course in Bioinformatics (ABS409) is offered by the collaboration of the permanent staff Dr Panagiotis Paoullis (PhD in Mathematics & Statistics) and the visiting lecturer Dr Chrystalla Iosif (PhD Computational Biology). Please refer to Annex 01 – Course Descriptions and Annex 05 – CVs.	Choose level of compliance:
<b>3.3 Synergies of teaching and research</b> d) *Teaching skills and pedagogic merits should be as important as research when it comes to promotions and annual reviews.	We agree with the EEC’s commend and we apologize if it was not fully clarified during the onsite visit. As part of the promotion and annual reviews the four pillars evaluated with equal weights are: (1) Teaching (2) Research (3) Administrative Work and (4) Social Contribution and Recognition. The Teaching pillar is evaluated by various qualitative indicators such as development of course material, use of innovative teaching methods, student evaluation etc.	Choose level of compliance:
e) *Now that the publication numbers appear to be increasing for the School, it is time to turn the focus from quantity to the quality/impact/citations of the studies published by the teaching staff. This will be in line with changing recommendations in the ranking systems of the future. The EEC strongly believes it to be important for the	We recognize the importance of shifting our focus from the quantity to the quality, impact, and citations of the studies published by our faculty. This aligns with evolving recommendations in ranking systems and will enhance the credibility of our B.Sc. programme in Applied Biomedical Sciences. One of our newly established Department’s strengths is the diverse qualifications	Choose level of compliance:

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<p>credibility of the B.Sc. programme that the teaching staff continues to improve the level at which they perform competitive research in the field of biomedical science. To help with this, a strategic discussion should be held that narrows the focus of the research fields that the Departments involved in this programme try to cover.</p>	<p>of our faculty, encompassing areas in Biological Sciences, Medicine, and Pharmacy. One of the main goals of the Research Strategy of the Department is to initiate interdisciplinary collaborations and enhance synergies for new research ideas, ultimately leading to the development of innovative basic and applied research. To achieve this, we are defining basic thematic areas of research based on our staff's qualifications, expertise, and common goals.</p> <p>Upon successful programme accreditation we plan to create thematic research Units to promote focused research work in specific areas, such as proteomics and biomarker discovery as well as the evaluation of the medicinal actions of indigenous plant extracts, using cancer cell lines and animal models. This strategic approach will help us narrow the focus of the research fields covered by the Departments involved in this programme, ensuring high-quality, competitive research</p>	
<p>f) The role of Deputy or Co-coordinator (written in both ways in the documentation) of the Programme should be formally clarified in comparison to the Coordinator to minimize the risk of confusion for the students and to make sure everyone is clear on who decides what.</p>	<p>The Coordinator of the study programme in Applied Biometrical Sciences oversees the academic and administrative functions of the program, ensuring curriculum alignment with industry standards, managing faculty recruitment and development, and facilitating research opportunities and ensuring that the program meets accreditation requirements. The Coordinator also collaborates with external stakeholders to enhance the program's visibility and integration into the broader scientific community.</p> <p>The Deputy Coordinator assists the Coordinator in their work and specific duties include managing</p>	<p>Choose level of compliance:</p>

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	<p>day-to-day administrative tasks, coordinating student admissions and orientation, organizing events and workshops, and liaising with faculty and students to address any immediate concerns. The Deputy assists the coordinator in matters of program assessment and development, contributing to strategic planning and implementation of new initiatives to improve the program's quality and effectiveness as well as serve as the primary point of contact for students, providing academic guidance and support.</p>	

#### 4. Student admission, progression, recognition and certification (ESG 1.4)

Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
<p>a) Concerns were raised by the EEC concerning the difficulties to accommodate the advisable increasing number of students in the existing facilities (classrooms and labs). It should be considered that these facilities have to be shared with students from other degrees currently offered by the School, and also with experimental research performed by the teacher staff. It is strongly recommended to anticipate this situation by performing an accurate and future looking plan regarding the availability of additional facilities, and set a cap on the maximum number of students that can be accommodated without jeopardizing other training programmes and research at the involved Departments.</p> <p>The EEC thinks that lab experience is vital in a programme like this, although this is not under discussion and it is a key strength of the programme reviewed here, we believe that this point should be emphasized through both graduate and post-graduate studies.</p>	<p>We understand the importance of ensuring that our facilities can adequately support both the increasing student population and the needs of other programmes and research activities. Currently, we have four teaching labs exclusively used by the Nursing Department, five teaching labs, one lab that is used for both research and teaching, and two labs dedicated solely to research exclusively used by the Department's Researchers. These labs are currently utilized at only 40% of their capacity. This provides us with significant flexibility to accommodate additional students without jeopardizing the quality of our training programmes or ongoing research.</p> <p>To proactively address potential challenges, we follow a comprehensive and future-oriented planning process to review our timetable and classroom allocation procedures. These procedures are coordinated by the Academic Operations Office, ensuring efficient allocation of classrooms and labs to meet the needs of all students and programmes.</p> <p>Since the academic year 2020-2021, we have introduced a pre-registration process as a required step prior to the beginning of each academic semester. During the pre-registration phase, all students in conventional programmes of study, who are continuing their studies in the next semester, are pre-registered to courses before the start of the academic year. The primary goal of pre-registration is to facilitate student registration and</p>	<p>Choose level of compliance:</p>

Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
	<p>optimize course scheduling. This is achieved by:</p> <ul style="list-style-type: none"> <li>• Scheduling time, early on, for students to consult with their advisors for course selection and academic performance.</li> <li>• Projecting more accurately course demands for the academic year and audience numbers per course.</li> <li>• Assessing the offering of courses with a limited number of participants and identifying needs for co-subject offering (synergies).</li> <li>• Finalizing course offerings for the next year and faculty to course allocation/faculty load for the year.</li> <li>• Creating an optimal class schedule based upon pre-registration activities (i.e., minimizing timetable conflicts).</li> </ul> <p>We are confident that these measures allow us to accommodate the growing number of students while maintaining the high standard of lab experience that is vital for our programme. There are provisions to also set a cap on the maximum number of students to prevent any negative impact on other training programmes and research activities. The timetable coordinator of the department is also responsible for the allocation of student laboratory groups, further ensuring efficient use of our facilities.</p>	

## 5. Learning resources and student support (ESG 1.6)

Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
<p><b>5.1 Teaching and Learning resources</b></p> <p>a) While sufficient teaching resources appear to be available, there is a potential risk due to uncertainty about the number of students expected. This necessitates a high degree of flexibility from both teaching staff and administration, posing potential challenges. If a larger-than-anticipated number of students enrol, there may be constraints in space and an insufficient number of teaching staff. However, the EEC acknowledges that such risks are inherent in launching a new programme. The School of Health Sciences recognizes this risk and has implemented sufficient flexibility to adjust the programme as needed.</p> <p>Nonetheless, a significant strength lies in the accessibility and interaction between students and teaching staff, as highlighted in interviews with current and former students of the Pharmacy programme. Preserving and nurturing this dynamic interaction should be prioritized as student numbers increase.</p>	<p>Please refer to previous responses 2g and 4a.</p>	<p>Choose level of compliance:</p>
<p><b>5.2 Physical resources</b></p> <p>b) Two concerns were identified by the EEC: The first concern is the dual use of Teaching Laboratories for educational programmes, including the Pharmacy and Nursing programmes, as well as for scientific research by the staff members. According to interviews, the laboratories are</p>	<p>As described in response 4a, there is a plan for accommodating Biomedical Science students in the existing laboratories for teaching (i.e. Biochemistry, Molecular Biology, etc). The laboratories are fully equipped and capable of accommodating these students without influencing the educational process. There are also 3 additional and separate research labs, that can accommodate students for</p>	<p>Choose level of compliance:</p>

Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
<p>currently allocated 40% of their time for teaching purposes, leaving only 60% available for research. The EEC believes this arrangement already imposes constraints on research, requiring scheduling around teaching occupancy of the laboratories, and teaching and administrative duties of the staff members. This will be further exacerbated by the introduction of the new Applied Biomedical Sciences programme. This issue underscores the importance of university lecturers actively engaging in scientific research. Such involvement enriches their teaching by integrating cutting-edge developments and current knowledge into their courses, thereby inspiring students and cultivating a culture of inquiry and innovation. Presently, this aspect appears insufficiently prioritized. The proposed solution, suggested by the Head of the Department and programme Coordinators, is to expand laboratory capacity if necessary. However, this solution could take years to implement and thus potentially compromise the quality of research in the interim. Therefore, the EEC recommends ensuring that sufficient time and access to laboratory facilities are preserved for scientific research by staff members.</p>	<p>their research and undergraduate thesis. Teaching is for only 26 weeks per year and all the remaining weeks teaching staff is using its research facilities for undergraduate and postgraduate students. Since this is a dynamic process and is based on the program needs, there is a plan in place for expanding and upgrading the existing research facilities so as to accommodate more students.</p>	
<p>c) The second concern of the EEC is the programme's dependence on collaboration with the Karaiskakio Foundation for training in advanced and costly techniques such as flow cytometry, immunohistochemistry, and</p>	<p>We would like to thank the EEC for the above recommendations which have been taken into consideration. The hosting of students by the collaborating stakeholders, including the Karaiskakion Foundation will be regulated and will be binding by MOUs, as outlined in previous</p>	<p>Choose level of compliance:</p>



Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
<p>whole genome sequencing. It is understood that these skills will primarily be taught through internships offered in courses ABS306 (Laboratory Techniques in Biomedical Sciences/Professional Development) and ABS408 (Undergraduate Thesis). However, the Karaiskakio Foundation also hosts students from other universities across Cyprus, raising uncertainty about access for Frederick University students. This uncertainty is compounded by the potential prioritization of more experienced MSc students over less experienced BSc students.</p> <p>To address this issue, the EEC strongly recommends establishing binding agreements with the Karaiskakio Foundation specifically for training in advanced techniques. This could involve dedicated course modules rather than relying solely on internships, ensuring consistent and equitable access for all students from Frederick University.</p>	<p>response 1c (Please also refer to Annex 03 – MOU).</p> <p>In addition, to enhance the experience of the students in advance Biomedical techniques some of the lectures and practicals of the following specialised courses will be delivered by special visiting lecturers who are currently collaborating with the stakeholders' facilities. In this context students will have the opportunity to also train in the practical applications using specialised equipment and learning and practicing the relevant methodologies.</p> <p>These courses include:</p> <ul style="list-style-type: none"> <li>• ABS301 Clinical Chemistry</li> <li>• ABS304 Immunohematology</li> <li>• ABS305 Medical Microbiology</li> <li>• ABS307 Molecular Virology</li> <li>• ABS310 Advanced Immunology</li> <li>• ABS313 Human Genetics</li> <li>• ABS404 Precision Medicine Biomarkers</li> <li>• ABS405 Advanced Hematology/ Transplantation</li> <li>• ABS409 Metabolism and diseases</li> </ul>	
<p><b>5.3 Human support resources</b></p> <p>d) The human support resources seem excellent, and the EEC has no specific recommendations.</p>	<p>We would like to thank the EEC for their positive feedback and for recognising the passion, dedication and commitment of the academic staff.</p>	<p>Choose level of compliance:</p>
<p><b>5.4 Student support</b></p> <p>e) The student support resources seem excellent, and the EEC has no specific recommendations.</p>	<p>We would like to thank the EEC for their positive feedback.</p>	<p>Choose level of compliance:</p>

**6. Additional for doctoral programmes**  
 (ALL ESG)

Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
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## 7. Eligibility (Joint programme) (ALL ESG)

Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
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## B. Conclusions and final remarks

Conclusions and final remarks by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>Based on the written and orally presented material, the EEC is of the opinion that the B.Sc. in Applied Biomedical Science <b>programme is generally of good quality, and that the responsible team has made a great effort to design the presented programme outline.</b> A major limitation for the EEC is of course that all that can be evaluated are plans on paper. The ability to execute them according to plan is yet to be proven, although the School has a good track record and the students interviewed from other programs appeared quite pleased with their educations and the support given by the university. Below, some areas of particular importance and/or concern are listed, especially where the committee notes that there is potential for improvement. Balance teaching of applied and research-oriented biomedical sciences. The objective of the programme is to train staff to meet the increasing demands of the job market, specifically in the rapidly expanding sector of healthcare provision. It aims to fulfil the current expectations and requirements of scientific and professional bodies, as well as societal needs, for the profession of Biomedical Scientist in the applied setting. This includes adhering to modern and evolving national and European standards and regulations that regulate clinical diagnostics. These standards and regulations should be part of the programme, as seems to be the case given that they will be covered in the courses Quality Assurance and Accreditation</p>	<p>We would like to sincerely thank the External Evaluation Committee for their dedicated work and invaluable comments, proved both within their evaluation report and during the frank discussions held through the visit. All suggestions made by the EEC have been adopted and implemented as seen by the answers throughout sessions 1-5. We are particularly pleased that the External Evaluation Committee is supportive of the accreditation of the new programme, and we are committed in providing an innovative programme with a top quality of education to all prospective students. We are especially grateful for the EEC's concluding statement for the many strengths and examples of good practice in this programme.</p>	<p>Choose level of compliance:</p>

Conclusions and final remarks by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>in Biomedical Sciences, Ethics for Biomedical Sciences, and Information Systems in Health (ABS104, ABS112, ABS206).</p> <p><b>Attention has been paid that the final degree contains a substantial percentage of the clinical laboratory placements and theory, in line with the time investment for these training elements.</b></p> <p><b>A key strength of this programme is its collaborative development with stakeholders in Clinical Medicine, focusing on clinical diagnosis needs.</b> The programme balances applied learning and research, ensuring that the students meet the new legislative requirements for working in a Clinical Laboratory. It is planned to be accredited by the newly founded professional body for laboratory medicine, the Pancyprian Association of Biomedical Scientists.</p> <p>Simultaneously, the programme aims to prepare students with a solid background in research, offering comprehensive training across various subdisciplines of biomedical research. The faculty is highly qualified, actively engaged in both research and teaching, and considered the program’s most valuable asset due to their enthusiasm, engagement, and competence. The programme is coherent and well-structured, with courses designed to build progressively on one another. This structure is supported by a relatively small team of 25 teachers, fostering close collaborations and seamless interaction among faculty members.</p> <ul style="list-style-type: none"> <li>The EEC strongly believes it is crucial for the credibility of the B.Sc. programme that</li> </ul>		

Conclusions and final remarks by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>the teaching staff continues to enhance their performance in competitive biomedical science research. To support this goal, a strategic discussion should be held to narrow the focus of the research fields covered by the Departments involved in this program.</p> <p><b>Improve teacher professionalization and recruitment</b></p> <ul style="list-style-type: none"> <li>• To foster systematic and continuous improvement in teaching, a clearer system for following up and awarding competence development within the pedagogic field should be considered. This approach would encourage the adoption and implementation of new pedagogic models in the B.Sc. program. Creating incentives for faculty to test and implement new pedagogic models, alongside the recruitment of international staff, will significantly enhance the program's educational quality and relevance.</li> <li>• For teaching the programme in English, it is highly recommended to recruit teaching staff from outside Cyprus or Greece. This would bring diverse perspectives, enhance the program's global relevance, and ensure a high level of proficiency in English instruction. It also has the potential to improve the research output from the</li> </ul>		

Conclusions and final remarks by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>implicated department(s). Moreover, teaching skills and pedagogic merits should be as important as research when it comes to promotions and annual reviews. Professors should be well-versed in modern teaching methods and capable of disseminating both theoretical and practical knowledge.</p> <ul style="list-style-type: none"> <li>• Additionally, the formal role of Deputy or Co-coordinator of the programme should be unified and clarified to minimize confusion among students and ensure clear decision-making processes.</li> </ul> <p><b>Making sure student supervision and support remain of high quality</b>  <b>The overall programme offers excellent supervision and support, with strong supervision plans and robust quality assurance measures. The faculty is experienced in student supervision and support, and Frederick University offers training in this area.</b></p> <p>Comprehensive student support services are available, and the programme is designed to be flexible, adapting to the needs of students. As a comparatively small university, there is effective communication between teachers and students, which facilitates the programme's ability to adapt to student needs. Small class sizes promote personalized interaction, enhancing the learning experience.</p> <ul style="list-style-type: none"> <li>• Looking ahead, the university plans to expand student numbers by offering the programme in both Greek and English, thereby</li> </ul>		

Conclusions and final remarks by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>attracting more foreign students. While this growth is promising, it poses risks to the frequency and quality of interactions between students and staff, as well as potentially reducing the time staff can dedicate to their research. The dual use of laboratories for teaching and research further threatens the availability of research facilities. It needs to be assured that adequate access for research purposes is maintained.</p> <ul style="list-style-type: none"> <li>As mentioned above, for teaching an English programme, it is recommended that the university recruit international teachers from non-Greek countries to enrich the programme with diverse perspectives. One option here could be to attract visiting scholars from other universities.</li> <li>Uncertainty in student enrolment poses risks for programme adjustment and resource allocation. This risk is present in all new education programmes, but is exacerbated by offering the programme in two languages. Finally, mandatory training for supervisors at the external stakeholders in teaching skills and assessment is recommended. Binding agreements for this should be in place with the external stakeholders.</li> </ul> <p><b>Future-proofing the programme content</b></p>		



Conclusions and final remarks by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>The programme aims towards the future, as it is designed together with societal stakeholders and addresses a clear emerging problem: the lack of staff for Clinical Laboratories in Cyprus. This is apparent from the programme, which is comprehensive and includes courses on all necessary skills in clinical medicine. It also takes into account upcoming legislation regarding the competence and registration of clinical laboratory staff.</p> <ul style="list-style-type: none"> <li>• Nevertheless, the EEC believes that further improvements can be made in the scientific content of the programme to prepare it and its students for the future. Specifically, the programme should include or expand modern concepts in biomedicine such as course topics on the human microbiome and its implications, bioinformatics, big data and health, and proactive aging and related regenerative medicine. Concerning the lack of bioinformatics, the EEC recommends to consider to recruit a dedicated bioinformatics teacher, or if not feasible consider a visiting part-time appointment, e.g. from the Karaiskakio Foundation.</li> <li>• Another notable caveat that the EEC recommends addressing is the lack of instruction on animal models. Additionally, offering courses on the business and entrepreneurship aspects of</li> </ul>		

Conclusions and final remarks by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>biomedical sciences, potentially as electives, would enhance the programme by providing students with a broader understanding of the field.</p> <ul style="list-style-type: none"> <li>For future proofing of the programme, another suggestion is the establishment of a well-organized alumni society. This society would provide longitudinal information about the career and employment paths of graduates, serving as a pivotal quality index for the academic program. This feedback loop would be invaluable in continually refining and updating the curriculum to meet the evolving needs of the industry and society.</li> </ul> <p><b>Ensure the practical aspects of becoming a biomedical scientist</b></p> <p><b>A notable strength of the programme is the significant emphasis on practical work,</b> offering extensive hands-on training not only in research labs but also with external stakeholders. Overall, the facilities to support this practical training are well-established and comprehensive.</p> <ul style="list-style-type: none"> <li>A risk is that the successful placement of students in clinical laboratories is heavily reliant on the commitment of stakeholders. To ensure consistent and reliable student placements, the EEC recommends establishing binding, longterm agreements with these stakeholders. For</li> </ul>		


Conclusions and final remarks by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>contingency planning, a strategy has to be devised in case the stakeholder wants to quit or goes into bankruptcy. In addition, it is unclear to the EEC after scrutinizing the documentation how the rotation teams are divided for course BMS306.</p> <ul style="list-style-type: none"> <li>• A similar concern involves the training of advanced techniques that are not present in-house. The programme depends on the Karaiskakio Foundation for training students, but there is competition for access to these training opportunities from educational programs offered by other universities. To address this challenge, the EEC advises securing binding agreements with the Karaiskakio Foundation to guarantee dedicated training or even thesis slots for the students.</li> <li>• For the research activities at the external stakeholders, the students need to travel to laboratories that are situated outside the campus. It needs to be clarified how the students can reach these.</li> </ul> <p>In summary, the proposed B.Sc. programme in Applied Biomedical Sciences has potential to fill a need on the educational market in Cyprus, especially given the new legislation that aims to formalize the competence and hands-on experience of staff in clinical laboratories. The programme has been designed with this in mind and</p>		



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<p>in close collaboration with the “end users”, i.e. representatives for companies who will eventually employ the students graduating from this type of programmes. <b>The EEC concludes that after some revisions of the proposal, there is no reason why this programme could not develop into an important and appreciated programme with increasing student cohorts and a dedicated teacher team who stay in close contact with the student throughout the four years of study. The EEC sees many strengths and examples of good practice in this programme.</b> The implementation of the above recommendation will secure its validity when student cohorts become larger and more internationally diverse. In this way, the programme can be future-proofed and stay relevant, thereby enabling that the highly set goal to provide society with tomorrow’s biomedical laboratory scientists is fully achieved.</p>		



### C. Higher Education Institution academic representatives

<i>Name</i>	<i>Position</i>	<i>Signature</i>
<b>Prof. George Demosthenous</b>	Rector	

**Date:** 08/07/2024

