



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ  
HELLENIC REPUBLIC



Εθνική Αρχή  
Ανώτατης Εκπαίδευσης  
Hellenic Authority  
for Higher Education

Αριστείδου 1 & Ευριπίδου 2 • 10559 Αθήνα | 1 Aristidou str. & 2 Evripidou str. • 10559 Athens, Greece  
T. +30 210 9220 944 • F. +30 210 9220 143 • E. secretariat@ethaae.gr • [www.ethaae.gr](http://www.ethaae.gr)

# Accreditation Report

## for the Undergraduate Study Programme of:

**Biology**

**Institution: University of Patras**

**Date: 22 January 2023**

Report of the Panel appointed by the HAHE to undertake the review of the Undergraduate Study Programme of **Biology** of the **University of Patras** for the purposes of granting accreditation.

## TABLE OF CONTENTS

<b>Part A: Background and Context of the Review</b> .....	<b>4</b>
I.    The External Evaluation & Accreditation Panel.....	4
II.   Review Procedure and Documentation .....	5
III.  Study Programme Profile .....	9
<b>Part B: Compliance with the Principles</b> .....	<b>11</b>
Principle 1: Academic Unit Policy for Quality Assurance.....	11
Principle 2: Design and Approval of Programmes .....	14
Principle 3: Student- centred Learning, Teaching and Assessment.....	17
Principle 4: Student Admission, Progression, Recognition and Certification .....	20
Principle 5: Teaching Staff.....	22
Principle 6: Learning Resources and Student Support.....	26
Principle 7: Information Management .....	29
Principle 8: Public Information .....	32
Principle 9: On-going Monitoring and Periodic Internal Review of Programmes .....	34
Principle 10: Regular External Evaluation of Undergraduate Programmes.....	37
<b>Part C: Conclusions</b> .....	<b>39</b>
I.    Features of Good Practice .....	39
II.   Areas of Weakness .....	39
III.  Recommendations for Follow-up Actions .....	40
IV.  Summary & Overall Assessment .....	42

## **PART A: BACKGROUND AND CONTEXT OF THE REVIEW**

### **I. The External Evaluation & Accreditation Panel**

The Panel responsible for the Accreditation Review of the Undergraduate Study Programme of **Biology** of the **University of Patras (UP)** comprised the following four (4) members, drawn from the HAHE Register, in accordance with Laws 4009/2011 & 4653/2020:

- 1. Prof. Thimios Mitsiadis (Chair)**  
Universität Zürich, Switzerland
  
- 2. Prof. Emeritus Spiros Agathos**  
Université Catholique de Louvain, Belgium
  
- 3. Prof. Karen Angeliki Krogfelt**  
Roskilde Universitet, Denmark
  
- 4. Mr Georgios Noutsos (student)**  
National and Kapodistrian University of Athens, Greece

## II. Review Procedure and Documentation

The Hellenic Authority for Higher Education (HAHE) formed an external and independent panel of experts to assess the compliance of the study programme of Biology of the University of Patras (UP) in accordance with the HAHE Quality Assurance requirements (laws 4009/2011 & 4653/2020). The assessment was conducted through document reviews plus onsite and online interviews. The method used was an evidence-based process centred on a sampling of the Department's activities and it was aimed at evaluating the fulfilment of the HAHE requirements of the relevant Quality Standard of the Undergraduate Study Programme (Integrated Master) and commenting on its compliance, effectiveness, and applicability for the scope of the requirements. The information provided by the Department was assumed to be factually correct.

The entire evaluation and accreditation exercise did include a site visit of the Department and University campus in Patras, except for Mr. Georgios Noutsos who participated remotely using the Zoom platform.

On January 5, 2023 the External Evaluation and Accreditation Panel (EEAP) received from HAHE the Accreditation support material from the HAHE Cloud link <https://docs.ethaae.gr/s/ATSANWsjsedRRgc>, which contained the following:

### 1. **Biology – University of Patras Material, consisting of the documents:**

B0. Contents

B1. Proposal of Academic Accreditation

B2. Quality Policy of Undergraduate

Study Programme B3. Study Guide

B4. Regulations

B5. Course Outline

B6. Quality Targeting

B7. Model Questionnaires to Students for Course Evaluation and Results

B7.1 Sample of Undergraduate Study Programme COVID\_19

B7.2 Sample of Undergraduate Study Programme

B7.3 Sample of Laboratory

B7.4 Sample of Laboratory COVID\_19

B7.5 Sample of Graduates

B7.6 Evaluation of Study

B7.7 Questionnaire Results of Undergraduate Study Programme  
COVID\_19

B7.8 Questionnaire Results of Laboratory COVID\_19

B7.9 Questionnaire Results of Graduate

B8. Internal Evaluation of Biology Programme

B9. Quality Data OPESP

B10. Other Documents

B10.1 New Undergraduate Study Programme

B10.2 Teacher Certification

B10.3 External Evaluation

B10.4 Certification of Digital Skills

B10.5 Certification of Ichthyologist

B10.6 Cooperation Memorandum

B10.7 Internal Department Report (2021-2022)

## **2. HAHE Material, containing the documents: European Qualifications Framework**

### **Accreditation Guide:**

P1a. Standards for Quality Accreditation Undergraduate Programme Biology

P12a. Guidelines for the EEA Panel P13a. Mapping Grid

P14a. Template for the Accreditation Report

Standards for Quality Assurance of Undergraduate Programmes

### **ABBREVIATIONS**

Quality Indicators Dept Biology 2015-2016

Quality Indicators Dept Biology 2016-2017

Quality Indicators Dept Biology 2017-2018

Quality Indicators Dept Biology 2018-2019

Quality Indicators Dept Biology 2019-2020

Quality Indicators Dept Biology 2020-2021

Quality Indicators Undergraduate Programme Biology 2015-2016

Quality Indicators Undergraduate Programme Biology 2016-2017

Quality Indicators Undergraduate Programme Biology 2017-2018

Quality Indicators Undergraduate Programme Biology 2018-2019

Quality Indicators Undergraduate Programme Biology 2019-2020

Quality Indicators Undergraduate Programme Biology 2020-2021

On Monday January 16, 2023, the members of the AP reviewing the Biology undergraduate study programme of UP travelled from Athens to Patras.

On Tuesday January 17, 2023, the members of the AP started formally (Mr. Noutsos via Zoom) at 12:30. In the first part of this meeting, the UP Vice-Rector and President of MODIP Prof. D. Mantzavinos familiarised the panel with the UP facts and figures, and the Head of the Biology Department Associate Prof. S. Dailianis gave an overview of the Department's and UP's origins, evolution and current status. The different aspects of compliance with the accreditation principles (A1-A10) were presented by OMEA Head Prof. C. Dermon and discussed with her and other OMEA members of the Department, including Prof. E. Papastergiadou, Asst. Prof. G. Kallergi, Prof. S. Giokas with the presence and supporting data from MODIP representative Prof. E. Billis, Prof. I. Giannikos and Prof. C. Stathopoulos plus MODIP staff Ms F. Papadatou (MODIP Acting Director). The EEAP had a tour of classrooms, lecture halls, library, museums, laboratories, and other facilities including discussions with one Professor (Head of Animal Biology section S. Giokas), one Associate Professor (Head of Plant Biology section G. Grammatikopoulos), two Assistant Professors (Head of Genetics, Cell & Developmental Biology I. Vasilopoulos and E. Tzanatos) as well as four Laboratory Teaching Personnel (EDIP) (Mr. S. Tsakas, Ms. O. Paulou, Ms. S. Spanou, Mr. A. Kapareliotis). Technical Laboratory Staff (ETEP) Mr. G. Passas, Mr. G. Tryfonopoulos and secretary Ms. E. Bouzamanaki.

The following day, Wednesday January 18, 2023, starting at 09:30, the AP subsequently had a meeting with selected Faculty members who have distinct roles in the Department that included three Professors P. Dimopoulos, K. Koutsikopoulos and P. Makridis , three Associate Professors I. Margiolaki, G. Grammatikopoulos, M. Panitsa and four Assistant Professors G. Petropoulou, E. Rosmaraki, I. Kazanis, I. Vasilopoulos. The next meeting was between the AP members and seven students of the Department. Next came an on-line meeting between students graduated from the Department. The invited graduates discussed their experiences within the programme and their career paths. The alumni of the Biology study programme who work in various sectors, i.e., A. Vasilopoulou, Scientific Researcher, Roche Diagnostics, Germany; J. Bakogiannis, Nature Mental Health Associate Editor; A. Valmas, Clinical Research Associate, Win Medica Pharmaceutical SA, Attiki, Greece; E. Tseliou, Quality Assurance & Business Development Manager Sibelius Natural Products, Abingdon, UK; V. Tsarpali, European Registered Toxicologist, Frezyderm, Greece; G. Katsanos, MSc student, Department of Pharmacology, University of Patras, Greece; Ch. Chondrogiannis, Research fellow Trinity College Dublin, School of Natural Sciences, Botany; I. Tziortzis, Public Official, Water Development Department, Nicosia, Cyprus; K. Kolia, MSc Biologist, Secondary education teacher; M. Kloukinioti, PhD candidate, Department of Pharmacology and Toxicology, Faculty of Health, Medicine and Life, Maastricht University.

The following day, Wednesday January 18, 2023, starting at 09:30, the AP subsequently had a meeting with selected faculty members who have distinct roles in the Department that included three Professors P. Dimopoulos, K. Koutsikopoulos and P. Makridis, three Associate Professors I. Margiolaki, G. Grammatikopoulos, M. Panitsa and four Assistant Professors G. Petropoulou, E. Rosmaraki, I. Kazanis, I. Vasilopoulos. The next meeting was between the AP members and seven students of the Department. Next came an on-line meeting between students graduated from the Department. The invited graduates discussed their experiences within the programme and their career paths. The alumni of the Biology study programme who work in various sectors, i.e., A. Vasilopoulou, Scientific

Researcher, Roche Diagnostics, Germany; J. Bakogiannis, Nature Mental Health Associate Editor; A. Valmas, Clinical Research Associate, Win Medica Pharmaceutical SA, Attiki, Greece; E. Tseliou, Quality Assurance & Business Development Manager Sibelius Natural Products, Abingdon, UK; V. Tsarpali, European Registered Toxicologist, Frezyderm, Greece; G. Katsanos, MSc student, Department of Pharmacology, University of Patras, Greece; Ch. Chondrogiannis, Research fellow Trinity College Dublin, School of Natural Sciences, Botany; I. Tziortzis, Public Official, Water Development Department, Nicosia, Cyprus; K. Kolia, MSc Biologist, Secondary education teacher; M. Kloukinioti, PhD candidate, Department of Pharmacology and Toxicology, Faculty of Health, Medicine and Life, Maastricht University.

In the next meeting, the AP discussed with ten social partners and employers of the study programme's graduates Dr. M. Klapa, Principal Researcher, Head of Metabolic Engineering and Systems Biology Lab (MESBL), Foundation for Research and Technology HELLAS / Institute of Chemical Engineering Sciences; K. Stefanidis, PhD Researcher, Institute of Marine Biological Resources and Inland Waters (IMBRIW) - Hellenic Centre for Marine Research; M. Avgeris, Associate Professor, School of Medicine, National and Kapodistrian University of Athens, Greece; Ch. Yiotis, Assistant Professor, Department of Biological Applications & Technology, University of Ioannina, Greece; S. Karapanagiotis, Research and Development Department, Galaxidi Marine Farms S.A.

Lastly, after a debriefing among AP members in private, the panel provided an informal overview of their preliminary impressions and assessment of the Biology study programme to the Vice-Rector of UP Prof. D. Mantzavinou, the Head of the Department Associate Prof. S. Dailianis, and representatives of OMEA (Professors C. Dermon, E. Papastergiadou and S. Giokas, Assistant Prof. G. Kallergi) and MODIP (Prof. E. Billis, I. Giannikos and C. Stathopoulos) and discussed their major findings and recommendations.

Upon completion of the two days of meetings at UP, the AP was glad to note a positive atmosphere and a willingness of the Department to cooperate and support the University's QA policy at all levels with a commitment to maintaining and further upgrading the quality standards of the Department and the University in compliance with HAHE. The AP would like to thank the Department and University Administration as well as all Faculty members for their cooperation and fruitful discussions.

During the following three days (January 19-22, 2023), the AP members had meetings for the completion of the draft Accreditation Report.



### III. Study Programme Profile

The Department of Biology is part of the School of Natural Sciences of the UP and is located in the University's central campus in Patras (next to Rio village). It was founded in 1967 and is the first Biology Department in Greece. The undergraduate study programme is designed with the aim of offering high-quality comprehensive studies in Biology at all levels of life organization, from molecules and genes through cells and organisms to populations and ecosystems. The programme covers a broad range of areas within Biology and its sub-disciplines, including both basic and applied life sciences. It aspires to provide the students with both a strong theoretical background and practical training in all fields of Biology thanks to its flexibility and versatility. The programme amounts to a total of 240 ECTS over 4 years (8 semesters) and upon completion it leads to a Diploma in Biology together with a Diploma Supplement in accordance with EU regulations. The undergraduate study programme starts with basic courses in the first 4 semesters and continues with specialisation courses in the remaining 4 semesters, where the students can follow one out of three orientations and perform an optional final diploma thesis project. The latter is carried out during the 4<sup>th</sup> year (semesters 7 and 8) and is based on research.

The great majority of the ~120 incoming students per year are admitted with high qualifications (typically > 17000 points in the national entry examination) and there is an increase in the average score of the graduates of the Department of Biology, from 7.09 (in 2015-2016) to 7.39 (in 2020-2021). There were 561 registered undergraduate students actively pursuing their studies (ενεργοί) in the academic year 2019-2020 (study duration < v+2 years where v = 4) and 119 students had gained entrance in the 1st year in the academic year 2019-2020 compared to 104 students who had been graduated.

Since its previous external evaluation in 2013, the Biology Department has shown a good academic progression as evidenced by the increasing number of research active Faculty members, high-impact research publications and corresponding citations, participation in competitive research programmes and good rankings among similar programmes in Greece. During the same period, however, the Department has suffered a major decrease in financial support from the government because of Greece's economic crisis. Similarly, the total number of teaching staff has decreased without a commensurate drop of incoming students.

The students graduating from the Biology study programme are well qualified and find employment in academic institutions, research centres, industries, biomedical laboratories, and other organisations in the public and private sectors both in Greece and abroad. Despite multiple efforts over the years, the Biology diploma does not confer recognized professional qualification (Επαγγελματικά δικαιώματα) within the Greek labour market. A further career outlet for students is in pedagogical and teaching competence, upon completion of a corresponding qualification module. Finally, the Biology Department at UP offers advanced studies (2<sup>nd</sup> and 3<sup>rd</sup> cycle): one postgraduate programme of its own (Biological Sciences: Research and Applications), three postgraduate programmes with other Departments (Environmental Sciences; Life Sciences Informatics; Oceanography: Exploration, mapping and management of the marine environment), doctoral studies as well as post-doctoral research in all the above-mentioned fields.

The Department facilities reside in a building in the main UP campus with classrooms, offices, teaching and research laboratories, secretariat, library spaces and museum collections. Classrooms as well as teaching and research laboratories are generally adequate and contain up-to-date equipment. However, both the teaching and the research spaces available require improvement and redesign in view of evolving needs.

The Department is composed of 30 Faculty members (24 Teaching and Research Staff - ΔΕΠ and 6 Laboratory Instruction Staff - ΕΔΙΠ) together with 4 administrative and support employees and 2 technical laboratory staff (ΕΤΕΠ). The current demographics of the Faculty members attest to a very experienced human resource (51% of them have at least 10 years of service). In addition to their teaching duties, the Faculty are engaged in research and outreach service to society.

The Department aspires to strengthen its links to a range of stakeholders and society-at-large through well-targeted initiatives. Through this, the undergraduate students are encouraged to participate in a number of scientific and social events and to find outlets for future employment or further studies.

## PART B: COMPLIANCE WITH THE PRINCIPLES

### Principle 1: Academic Unit Policy for Quality Assurance

**INSTITUTIONS SHOULD APPLY A QUALITY ASSURANCE POLICY AS PART OF THEIR STRATEGIC MANAGEMENT. THIS POLICY SHOULD EXPAND AND BE AIMED (WITH THE COLLABORATION OF EXTERNAL STAKEHOLDERS) AT ALL INSTITUTION'S AREAS OF ACTIVITY, AND PARTICULARLY AT THE FULFILMENT OF QUALITY REQUIREMENTS OF UNDERGRADUATE PROGRAMMES. THIS POLICY SHOULD BE PUBLISHED AND IMPLEMENTED BY ALL STAKEHOLDERS.**

*The quality assurance policy of the academic unit is in line with the Institutional policy on quality, and is included in a published statement that is implemented by all stakeholders. It focuses on the achievement of special objectives related to the quality assurance of study programmes offered by the academic unit.*

*The quality policy statement of the academic unit includes its commitment to implement a quality policy that will promote the academic profile and orientation of the programme, its purpose and field of study; it will realise the programme's strategic goals and it will determine the means and ways for attaining them; it will implement the appropriate quality procedures, aiming at the programme's continuous improvement.*

*In particular, in order to carry out this policy, the academic unit commits itself to put into practice quality procedures that will demonstrate:*

- a) the suitability of the structure and organisation of the curriculum;*
- b) the pursuit of learning outcomes and qualifications in accordance with the European and the National Qualifications Framework for Higher Education;*
- c) the promotion of the quality and effectiveness of teaching;*
- d) the appropriateness of the qualifications of the teaching staff;*
- e) the enhancement of the quality and quantity of the research output among faculty members of the academic unit;*
- f) ways for linking teaching and research;*
- g) the level of demand for qualifications acquired by graduates, in the labour market;*
- h) the quality of support services such as the administrative services, the Library, and the student welfare office;*
- i) the conduct of an annual review and an internal audit of the quality assurance system of the undergraduate programme(s) offered, as well as the collaboration of the Internal Evaluation Group (IEG) with the Institution's Quality Assurance Unit (QAU).*

### Study Programme Compliance

The structure and organization of the study programme is suitable including the scientific areas covering the Department's teaching programme objectives. The learning objectives, outcomes and qualifications are in accordance with the European and the National Qualifications Framework for Higher Education.

The Faculty members are enthusiastic and dedicated to promote and support high quality of teaching, with the ultimate goal of providing opportunities to the students to develop skills necessary for their future career. This is achieved by a solid theoretical and practical approach. Thus, the students have hands-on learning and practical application of the curriculum, which help to enhance the understanding of the subjects of the field. Fulfilling this educational structure the graduates are well prepared and competitive for the future workforce and contribution to society. Overall, the Faculty is prepared to provide high quality education for their students.

The Faculty members pay attention to the new trends and developments within this dynamic field of Biology. They are incorporating new material to the curriculum, focusing on the recent developments in Environmental Biology, Molecular Biology, Evolutionary and Developmental Biology, Bioinformatics and Computational analyses. Newly hired Faculty members support these changes.

All Faculty members are working towards the same goal of providing high-quality and state-of-the-art teaching. This is complemented by seminars including invited speakers, organized under the master's programme, which however are open to all students that are encouraged to attend.

The students are given the opportunity to conduct internships (practical work) in industrial or public entities giving exposure to the "real world".

Teaching is conducted both in the field (on site) and in the labs. Project-based teaching allows the students to work in small groups. Thereby, the students can focus on a scientific problem, enhance their communication skills, and develop critical thinking by hands-on experience and using newly published literature. This way of teaching encourages and promotes the interest in research work.

Students are assigned an academic mentor, who they can contact and seek support and guidance. Yet, all Faculty members are accessible to all students and are willing to advise them and guide them throughout the studies. This is highly appreciated by the students.

Attendance to the theoretical lecture courses is not mandatory, but space is restricted and designed to accommodate lower numbers of students. Due to the unduly high number of students enrolled in the Department (~20% over their capacity) many students end up not attending classes. Laboratory courses have mandatory attendance, and again due to the high number of students the lab courses are repeated several times during the semester, increasing the workload of the corresponding Faculty members and the related costs.

Laboratories have the necessary equipment for teaching (some of it ageing), but the hands-on technical personnel is insufficient.

In the recent COVID period the Faculty was remarkable in developing e-class material and special videos in order to sustain the quality of teaching.

Students evaluate the quality of lectures electronically. Statistical analyses of the evaluation data are available. The participation is not high, however the Faculty members are taking into consideration the comments and suggestions made by the students.

Faculty members and administrators of the Department appeared committed to ensure high quality of student support services.

Administrative services of the University are available and provide to the students all necessary documents (e.g., provision of hard copy of diplomas, certificates and transcripts) in Greek and in English. The University has established procedures to address student welfare issues, such as specialized staff for students' consultation in case of extenuating or troubling circumstances.

The Department fulfils the requirements of annual review procedures and internal audit of the quality assurance system being managed collaboratively with the OMEA and MODIP.

### Panel Judgement

<b>Principle 1: Academic Unit Policy for Quality Assurance</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

Establish regular seminars/workshops (encourage presentations in English) during the undergraduate programme. Incorporate visiting academics and collaborators from public education, private corporations, and other entities.

The PA strongly suggests establishing with the local authorities and UP an “annual science career day” in the centre of the city of Patras, which will be open for all students including those of high schools. In this context, local entities/industry, organizations (IAESTE, Erasmus+, environmental units etc.) and other stakeholders will present their portfolio of activities and explain what skills are needed to join them. Students can be inspired, discuss with the stakeholders, and arrange interviews for internships, thesis topics, present their CV for future recruitment, etc.

## Principle 2: Design and Approval of Programmes

INSTITUTIONS SHOULD DEVELOP THEIR UNDERGRADUATE PROGRAMMES FOLLOWING A DEFINED WRITTEN PROCESS WHICH WILL INVOLVE THE PARTICIPANTS, INFORMATION SOURCES AND THE APPROVAL COMMITTEES FOR THE PROGRAMME. THE OBJECTIVES, THE EXPECTED LEARNING OUTCOMES, THE INTENDED PROFESSIONAL QUALIFICATIONS AND THE WAYS TO ACHIEVE THEM ARE SET OUT IN THE PROGRAMME DESIGN. THE ABOVE DETAILS AS WELL AS INFORMATION ON THE PROGRAMME'S STRUCTURE ARE PUBLISHED IN THE STUDENT GUIDE.

*Academic units develop their programmes following a well-defined procedure. The academic profile and orientation of the programme, the objectives, the subject areas, the structure and organisation, the expected learning outcomes and the intended professional qualifications according to the National Qualifications Framework for Higher Education are described at this stage. The approval or revision process for programmes includes a check of compliance with the basic requirements described in the Standards, on behalf of the Institution's Quality Assurance Unit (QAU).*

*Furthermore, the programme design should take into consideration the following:*

- the Institutional strategy*
- the active participation of students*
- the experience of external stakeholders from the labour market*
- the smooth progression of students throughout the stages of the programme*
- the anticipated student workload according to the European Credit Transfer and Accumulation System*
- the option to provide work experience to the students*
- the linking of teaching and research*
- the relevant regulatory framework and the official procedure for the approval of the programme by the Institution*

### Study Programme Compliance

The strategy of the Department aims to establish and maintain excellence in teaching and research covering all basic fields of Biology.

Several biological disciplines are included following the trends in the Life Sciences such as Molecular and Cellular Biology, Biochemistry, Genetics, Evolution Biology, Physiology of plants and animals, Biotechnology, Ecology, Environmental Biology, Neurobiology, Microbiology and Fermentation, Crystallography, Immunology, and others. These disciplines are organized in three sectors: 1) Plant Biology; 2) Animal Biology; 3) Genetics, Cellular and Growth Biology.

Here the interests in teaching and research are supported by the Faculty and the students and regularly evaluated. The strategy is well designed and executed, yet a more focused and proactive articulation of their mid- and long-term vision so that the programme maintains its leading status.

Due to restricted funds and personnel, increasing synergies and collaborations with other Departments at UP, such as Medicine, Physics, Chemistry, will help in promoting

excellence.

The student programme is based on international standards and offers both theoretical and practical teaching. Theoretical teaching is supported by the e-class platform.

Field work, technologies and methodologies are offered by laboratory exercises, practical internship, and diploma work, where active participation and mandatory presence is required.

National academic partners as well as a number of stakeholders from industry mentioned that both the Biology undergraduates and graduates are very well trained, with broad knowledge, reliable and eager to learn. The engagement of the stakeholders with the students continues and the good training of the students is highly appreciated. Yet, the potential is there and the collaboration and exposure to local, national, and international entities should be improved.

The Biology programme is structured in semesters and seems rationally designed. Although there are no mentioned prerequisites for the succession of courses the Faculty members through informal and sporadic discussions with the students explain the reasoning and what is best for the student to follow in order to progress. The first year has rather basic courses including mathematics in which a major part of the student body lacks necessary knowledge. This is mainly due to important gaps from secondary education, principally in Biology and secondarily in mathematics. The secondary education textbooks in Biology are out-dated by at least two decades and therefore missing essential information that is crucial for the understanding of simple biological principles. Mathematics is not a required course for the PanHellenic examination system to enter into undergraduate university programmes in Health Sciences including in Biology.

The programme of studies is revised on a regular basis and is readily available for the students in the Study Guide. Students with special needs seem to be accommodated.

The programme follows the European Credit Transfer (ECTS). Although the workload is estimated as high, covering many aspects in Biology, it provides a broad basic knowledge to the students.

A two-month internship is offered to the students for practical training, which is judged as very attractive. The students apply to the Faculty and are selected to participate and receive a small allowance.

Teaching and research are mainly linked during the Diploma project work that is experimental but not compulsory. The experimental work is highly appreciated by the students, who, in the presence of the AP, expressed their desire to incorporate more hands-on courses in their studies. This could be achieved through collaborations with other research Institutes during the summer and/or through the Erasmus+ exchange programme.

The Department of Biology functions under the governance of UP, which complies to the rules set by the Ministry of Education through regular assessments.

## Panel Judgement

<b>Principle 2: Design and Approval of Programmes</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

## Panel Recommendations

Encourage student involvement in the education and in research by making active use of the web page ([alumni.upatras.gr](http://alumni.upatras.gr)) that will increase the interest of the students for the vast spectrum of opportunities the field of Biology.

Make use of social media to promote the field of Biology to the students. Urge the Department and UP to activate the existing social media network with students abroad. Further encourage participation in international competitions such as iGEM.

Disseminate the departmental activities, including results from competitions, participation in research projects and notable achievements. In short, a communication plan should be designed by the Department of Biology. This will increase visibility in the society and promote awareness among the decision makers.



### **Principle 3: Student- centred Learning, Teaching and Assessment**

**INSTITUTIONS SHOULD ENSURE THAT THE UNDERGRADUATE PROGRAMMES ARE DELIVERED IN A WAY THAT ENCOURAGES STUDENTS TO TAKE AN ACTIVE ROLE IN CREATING THE LEARNING PROCESS. THE ASSESSMENT METHODS SHOULD REFLECT THIS APPROACH.**

*Student-centred learning and teaching plays an important role in stimulating students' motivation, self-reflection and engagement in the learning process. The above entail continuous consideration of the programme's delivery and the assessment of the related outcomes.*

*The student-centred learning and teaching process*

- *respects and attends to the diversity of students and their needs, enabling flexible learning paths;*
- *considers and uses different modes of delivery, where appropriate;*
- *flexibly uses a variety of pedagogical methods;*
- *regularly evaluates and adjusts the modes of delivery and pedagogical methods aiming at improvement;*
- *regularly evaluates the quality and effectiveness of teaching, as documented especially through student surveys;*
- *reinforces the student's sense of autonomy, while ensuring adequate guidance and support from the teaching staff;*
- *promotes mutual respect in the student - teacher relationship;*
- *applies appropriate procedures for dealing with students' complaints.*

*In addition:*

- *the academic staff are familiar with the existing examination system and methods and are supported in developing their own skills in this field;*
- *the assessment criteria and methods are published in advance;*
- *the assessment allows students to demonstrate the extent to which the intended learning outcomes have been achieved. Students are given feedback, which, if necessary is linked to advice on the learning process;*
- *student assessment is conducted by more than one examiner, where possible;*
- *the regulations for assessment take into account mitigating circumstances;*
- *assessment is consistent, fairly applied to all students and carried out in accordance with the stated procedures;*
- *a formal procedure for student appeals is in place.*

#### **Study Programme Compliance**

The Department of Biology has implemented a curriculum with broad spectrum of topics and disciplines within Biology, organized in three sectors. The importance of Biology in the Life Sciences is reflected in the curriculum and the students are exposed to up-to-date fields and advances in Biology.

Students are well informed of the available choices through the Study Guide and are encouraged to follow their interests. Faculty members are open and available for relevant advice to the students. A number of compulsory courses give the basics in Biology

followed by a number of optional courses. Specialisation can be achieved through the practical internship and the Diploma work in a research project, both of which are optional.

During COVID, e-class teaching was developed and used successfully by the students. This is still available and should be updated as a complement to the current teaching practice.

There is a system of evaluation of each academic module in place via questionnaires to the students, which is used to advise adjustments of the curriculum. The same questionnaires allow the students to express their concerns and wishes regarding the teacher and teaching approach.

Students' assessment is based on clear examination procedures (written exams, problem-solving exercises, practical examination) that reflect well the learning outcomes of the course. Student performance in the courses is statistically analysed and presented to the internal evaluation committee (OMEA) of the Department.

In the course of the academic years, students, Faculty members and the administration are aiming at continuous interactions between them, ensuring excellence in the quality of studies.

### Panel Judgement

<b>Principle 3: Student- centred Learning, Teaching and Assessment</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

Encourage the constant evolution and update of the curricula, where cutting-edge subjects are taught such as Computational Biology, Developmental Biology and Environmental Biology.

Elective courses could be inspired by the alumni of the Department to include novel topics in Biology, such as using Artificial Intelligence (AI) in teaching and research.

The Department should encourage and reward excellence when attending and winning competitions.

The role of the academic advisor should be sustained and continuously supported.

The curriculum could be enhanced to encourage entrepreneurial and regulatory activities within an elective course or part thereof.

**Principle 4: Student Admission, Progression, Recognition and Certification**  
**INSTITUTIONS SHOULD DEVELOP AND APPLY PUBLISHED REGULATIONS COVERING ALL ASPECTS AND PHASES OF STUDIES (ADMISSION, PROGRESSION, RECOGNITION AND CERTIFICATION).**

*Institutions and academic units need to put in place both processes and tools to collect, manage and act on information regarding student progression.*

*Procedures concerning the award and recognition of higher education degrees, the duration of studies, rules ensuring students progression, terms and conditions for student mobility should be based on the institutional study regulations. Appropriate recognition procedures rely on institutional practice for recognition of credits among various European academic departments and Institutions, in line with the principles of the Lisbon Recognition Convention.*

*Graduation represents the culmination of the students' study period. Students need to receive documentation explaining the qualification gained, including achieved learning outcomes and the context, level, content and status of the studies that were pursued and successfully completed (Diploma Supplement).*

### **Study Programme Compliance**

During the visit of the UP, the AP felt that the Department has in place appropriate processes and tools to collect and effectively analyse information concerning the process of student progression. Complete lists containing this information are stored within the student registration system.

The UP has established clear procedures concerning higher education degrees, the duration of studies, rules ensuring student progression, terms and conditions for student mobility with Erasmus+ based on Departmental and UP rules described in the related UP document (Οδηγός Σπουδών).

UP recognition of credits is exclusively based on ECTS, according to the established European principles. The ECTS system is constantly applied across the curriculum. Information and documentation explaining the ECTS units are available to students in electronic form. Department graduates can be employed as teachers in secondary education. This teaching certification procedure is in place and is ensured and certified by the Department.

Multidisciplinary studies, mechanisms of co-supervision of student Diploma research projects by academic staff within other Departments are already established and are operational within the Department.

The Department adopted methods to further motivate students by participating in competitions distributing prizes to students that excel in specific subjects or achieve outstanding performance in their cohort.

The Department encourages students to graduate in a timely manner soon after the 8th semester. Students fulfilling all course requirements are allowed to graduate.

Students receive documentation explaining the qualification gained (Diploma) and the Diploma supplement (transcript). Documents are obtained electronically within a very short time. A simultaneous English translation of the Diploma is obtained.

### Panel Judgement

<b>Principle 4: Student Admission, Progression, Recognition and Certification</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

The graduation rate within 4-5 years has increased over the last few years. The AP strongly believes that this rate can continue to increase, since the Department manages and educates a big number of highly motivated and enthusiastic students.

Successful career paths for Department graduates are dependent on an appropriate legal framework that establishes employability rights into law (επαγγελματικά δικαιώματα Βιολόγων). The absence of this framework is a general problem for most of the Biology Departments in Greece. The AP firmly requests to the Education Ministry and other relevant authorities to resolve at the soonest this issue that has been highlighted multiple times in previous evaluations.

## Principle 5: Teaching Staff

**INSTITUTIONS SHOULD ASSURE THEMSELVES OF THE QUALIFICATIONS AND COMPETENCE OF THE TEACHING STAFF. THEY SHOULD APPLY FAIR AND TRANSPARENT PROCESSES FOR THE RECRUITMENT AND DEVELOPMENT OF THE TEACHING STAFF.**

*The Institutions and their academic units have a major responsibility as to the standard of their teaching staff providing them with a supportive environment that promotes the advancement of their scientific work. In particular, the academic unit should:*

- *set up and follow clear, transparent and fair processes for the recruitment of properly qualified staff and offer them conditions of employment that recognise the importance of teaching and research;*
- *offer opportunities and promote the professional development of the teaching staff;*
- *encourage scholarly activity to strengthen the link between education and research;*
- *encourage innovation in teaching methods and the use of new technologies;*
- *promote the increase of the volume and quality of the research output within the academic unit;*
- *follow quality assurance processes for all staff members (with respect to attendance requirements, performance, self-assessment, training etc.);*
- *develop policies to attract highly qualified academic staff.*

### Study Programme Compliance

The teaching staff (ΔΕΠ, ΕΔΙΠ & ΕΤΕΠ) is made up of dedicated academics of high quality whose teaching and accessibility are very much appreciated by current and former students.

The Department of Biology adheres to meritocratic and transparent procedures for the selection and recruitment of new Faculty members as embedded in the current legal framework using the ΑΠΕΛΛΑ platform. This recruitment initially based on covering teaching needs is now turning more towards strategic considerations such as novel research directions.

Research activities are monitored *via* universally accessible tools (Google Scholar, Scopus etc.) and attraction of external funding while teaching excellence is assessed by means of student evaluations.

Overall, research productivity and teaching quality are adequate and comparable with those of similar Departments in Greece.

Regarding research activity, further improvements are needed, especially as regards research productivity, impact and fund raising by a larger number of faculty members. The AP notes that some recently appointed Faculty members are strengthening considerably the research dimension of the Department. Hiring exceptional early and mid-career Faculty members will further enhance the international profile of the Department and secure additional highly competitive grants (e.g., ERC).

Teaching load is high, but it is expected that future appointments will alleviate this problem. A very small percentage of the teaching staff has been mobile by means of the Erasmus+ and related programmes, including sabbatical leaves.

There are some links between teaching and research in several courses and, especially, at the Diploma Thesis stage even though not all Faculty are equally active in research. The AP was assured by the Department that some highly dynamic trends in Life Sciences, such as Computational Biology and Regenerative Biology, are targeted as new specific research areas for strategic growth through their inclusion in teaching modules, research activities and future hires.

The teaching staff is evaluated by means of student surveys carried out online before the exam period, but student participation is low and remains so after the fully digital teaching that occurred during the pandemic. The evaluation results are not statistically sound due to the low number of participating students. They are communicated to the teaching staff but are not fully exploited by the lack of meaningful University comparators and benchmarks. The AP notes the absence of specific training in teaching innovation.

### Panel Judgement

<b>Principle 5: Teaching Staff</b>	
Fully compliant	
Substantially compliant	<b>X</b>
Partially compliant	
Non-compliant	

### Panel Recommendations

To ensure continued adherence to this Principle, the AP recommends the following actions:

The programme needs to be further enriched by pursuing additional hires of highly competitive academics using as a criterion not only the coverage of specific educational areas (γνωστικά αντικείμενα) but more importantly the introduction of cutting-edge research areas such as Computational and Systems Biology. Similarly, the hiring of highly qualified technical personnel is a must. These areas can be identified with the help of an

informal advisory group that is also proposed elsewhere as a valuable tool for guiding the Department in its multi-faceted missions.

The programme would benefit by pursuing an active outreach to academics, researchers and practitioners external to the Department in order to cover, at least in part (e.g. special chapters or course modules) the content of several courses including optional ones. This will allow exposure of both professors and students to new trends, bring in new approaches to teaching and research, and significantly alleviate the teaching load of the current Faculty members.

Teaching evaluations should be communicated to individual instructors in a more structured and systematic way rather than on an ad hoc basis, so that they can offer guidance in the undergraduate curriculum. Metrics to compare individual instructor performance to the average evaluations of the UP for all key performance questions should be developed. The Department should proactively communicate to the students that teaching evaluations are used to improve course delivery, instruction methodology, and the curriculum overall, and that they are very useful for further student engagement.

Annual Faculty workloads (percentage of effort in teaching, research and service) for staff members of all categories (ΔΕΠ, ΕΤΕΠ and ΕΔΙΠ) need to be explicitly articulated. Annual Faculty performance should be collected via their input and be evaluated by Faculty peer committees. A feedback loop between Faculty load and assignments and Faculty performance must be created to facilitate the pursuit of academic excellence. For example, academics that are excelling in teaching should be recognized and continue to be supported in this role. Similarly, exceptionally strong research performers should be rewarded.

Actions that can lead to a substantial increase in research funding should be considered. One way is to focus future hires on research-active Faculty, including recruitment of experienced external academics with an internationally competitive record of scientific achievements in Life Sciences. There is a need to establish a Faculty mentoring process for younger members and for those who are deemed, by universally accepted performance indicators, to fall short of the expected standard of performance.

The University research office (ΕΛΚΕ) should provide greater and systematic support to Faculty members in their pursuit of competitive external research funding, especially as regards European projects.

The Department is encouraged to work closer with the central UP authorities to allow professional development opportunities for Faculty members, including Sabbatical Leaves and shorter training (and retraining) opportunities.

The Department should introduce training sessions in modern science pedagogy approaches and evolving best practices with the help from the Office for Teaching and Learning recently legislated for all Greek Universities. Course assignments within the Biology programme should allow the establishment of a fair teaching load model for Faculty members.



It would benefit the Department to establish the concept of joint Faculty appointments, either within the UP or with Universities within Greece and abroad. Such appointments will bring an outside perspective that enriches the Department, should contribute to improved teaching practices and may generate joint research and funding opportunities.

To alleviate Faculty teaching load such that more time may be devoted to research, doctoral students and postdoctoral scientists may participate in some of the teaching activities. High-level researchers from National Research Centres (FORTH, CERTH, Democritos, Fleming, Academy of Athens, etc.) should deliver lectures / seminars that would inevitably improve current teaching and research plus generate new funding opportunities.

Given the modest record in research output by some of the current Faculty members, the AP recommends the establishment of a small group of external scientists, prominent in relevant fields of the Life Sciences, to serve as collaborators for improving the research performance of the Department.

## **Principle 6: Learning Resources and Student Support**

**INSTITUTIONS SHOULD HAVE ADEQUATE FUNDING TO COVER TEACHING AND LEARNING NEEDS. THEY SHOULD –ON THE ONE HAND– PROVIDE SATISFACTORY INFRASTRUCTURE AND SERVICES FOR LEARNING AND STUDENT SUPPORT AND –ON THE OTHER HAND– FACILITATE DIRECT ACCESS TO THEM BY ESTABLISHING INTERNAL RULES TO THIS END (E.G. LECTURE ROOMS, LABORATORIES, LIBRARIES, NETWORKS, BOARDING, CAREER AND SOCIAL POLICY SERVICES ETC.).**

*Institutions and their academic units must have sufficient funding and means to support learning and academic activity in general, so that they can offer to students the best possible level of studies. The above means could include facilities such as libraries, study rooms, educational and scientific equipment, information and communications services, support or counselling services.*

*When allocating the available resources, the needs of all students must be taken into consideration (e.g. whether they are full-time or part-time students, employed or international students, students with disabilities) and the shift towards student-centred learning and the adoption of flexible modes of learning and teaching. Support activities and facilities may be organised in various ways, depending on the institutional context. However, the internal quality assurance ensures that all resources are appropriate, adequate, and accessible, and that students are informed about the services available to them.*

*In delivering support services the role of support and administrative staff is crucial and therefore they need to be qualified and have opportunities to develop their competences.*

### **Study Programme Compliance**

The Department of Biology has a current staff of 24 teaching Faculty members (ΔΕΠ) plus one more in the process of appointment, 6 laboratory instructors (ΕΔΙΠ), 2 technical specialists (ΕΤΕΠ) and 4 administrative staff members. In addition, in order to meet teaching needs in the undergraduate curriculum, 5 lecturers were recently employed to teach courses in the framework of the act "Acquiring Academic Teaching Experience for Young Scientists Doctorate Holders" as well as 2 lecturers in accordance with the provisions of Presidential Decree 407/1980.

The Department of Biology is housed in a dedicated building (shared with the Department of Mathematics) covering three floors and a basement with a total area of 20,000 m<sup>2</sup>. It is endowed with adequate facilities and includes scientific equipment distributed among teaching and research laboratories. Significant facilities include a Computer Lab, a Lecture Hall, a Zoological museum, a Botanical museum and greenhouses. UP-wide infrastructures operated by the Department of Biology include the Electronic Microscopy and Microanalysis Centre housed in the Departmental building as well as a Botanical and Experimental Garden located at the edge of the UP campus. Furthermore, the Department has access to other UP-wide facilities, such as the Instrumental Analysis Lab, the Machine Shop and the Animal Unit at the Medical School, among others. Finally, thanks to the spatial proximity and thematic complementarity, Faculty members have access to advanced facilities of the nearby

Institute of Chemical Engineering Sciences (ICE-HT) of the Foundation of Research and Technology Hellas (FORTH).

To meet the educational needs of the Department, including the successful operation of its undergraduate curriculum, there are 4 classrooms, 1 seminar room, 7 teaching laboratory spaces and 19 research laboratory spaces. According to the feedback received by the AP from current and former students, the facilities, including the teaching laboratories, are just adequate and basic. The teaching staff noted that laboratory sessions of courses need to be dispensed in several repeated sessions because of the highly unfavourable student-to-teacher ratio leading to an excessive workload for Faculty members that are consumed by teaching activities at the expense of research.

The library facilities and resources that exist both locally within the Department (one library/reading room for each of the three Department sectors) and centrally in the UP campus are entirely adequate and are used extensively by the students. In addition to valuable encyclopaedias and rare collective editions, the library services are further supported by electronic infrastructure thus encouraging students to use modern bibliography and databases accessible both locally and remotely.

Teaching materials (textbooks, scientific journals, databases) are available to all registered students and the Departmental computer lab covers student needs, including PC workstations for in-class instruction. The teaching Faculty members routinely use electronic means to support the learning process with their students, notably through the e-class platform. This proved vital during the recent Covid-19 pandemic and it is firmly established for asynchronous and remote learning. Electronic means are also used extensively in information exchange and advising between Faculty members and students as well as in the completion of student questionnaires for course evaluation.

Further to digitally operated processes for registration, exams, application to scholarships etc. that are offered quite efficiently through various means (e-class, electronic secretariat, Departmental website), students have easy access to a wide range of specialised services including mobility programmes like Erasmus+, internships for practical training, career guidance, counselling, housing and meal services (for students meeting certain requirements), etc. Sports and cultural facilities (and opportunities) are also abundantly available thanks to the good organization of UP.

In addition to all the above services, Faculty members act as academic advisors to help students with guidance and advice towards the successful progression and completion of their studies. The AP was informed that this service is not functioning as expected and an adjustment that may include 3-member advisory committees is being considered.

## Panel Judgement

<b>Principle 6: Learning Resources and Student Support</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

## Panel Recommendations

In addition to the progressive appointment of new Faculty members (hopefully close to a projected total of 30 over the next five years), there is an acute need for the hiring of additional laboratory instructors (ΕΔΙΠ) and technical specialists (ΕΤΕΠ).

Although the available equipment for teaching is generally satisfactory, in several cases the instrumentation and surrounding lab space is obsolete, hence the Department and UP are urged to allocate the necessary funds to renovate the premises and set up more modern equipment. More generally, the Department should actively pursue funds to maintain and upgrade its facilities. The AP applauds the Faculty's efforts in this regard and strongly recommends further increasing the services provided to industry and other sectors based on the Department's know-how and on some of its existing advanced equipment.

The Botanical and Zoological Museums are not only significant educational tools but valuable showcases for the Department and should be moved to a more central location in the city of Patras so that they can contribute to the Department's and UP's outreach to society.

Although the Departmental premises are adequate, they are part of a large unattractive rectangular building without satisfactory communication and human exchanges between floors; even on the same floor there is a tendency for sequestration of students and Faculty in existing labs and offices. In keeping with current international trends, the Department is encouraged to help create convivial common areas where students could study and work on group projects but also meet on an ad hoc basis thus enhancing creativity, as a few Faculty members have already initiated it. Further improvements in the building accessibility to students with special needs are also recommended.

Despite its current compliance to health and safety through the corresponding handbook, the Department must place a considerably higher priority on instituting a comprehensive system of health and safety. Central to this are regular training seminars and drills and the appointment of a dedicated safety officer from its pool of laboratory teaching and technical personnel.

## Principle 7: Information Management

**INSTITUTIONS BEAR FULL RESPONSIBILITY FOR COLLECTING, ANALYSING AND USING INFORMATION, AIMED AT THE EFFICIENT MANAGEMENT OF UNDERGRADUATE PROGRAMMES OF STUDY AND RELATED ACTIVITIES, IN AN INTEGRATED, EFFECTIVE AND EASILY ACCESSIBLE WAY.**

*Institutions are expected to establish and operate an information system for the management and monitoring of data concerning students, teaching staff, course structure and organisation, teaching and provision of services to students as well as to the academic community.*

*Reliable data is essential for accurate information and for decision making, as well as for identifying areas of smooth operation and areas for improvement. Effective procedures for collecting and analysing information on study programmes and other activities feed data into the internal system of quality assurance.*

*The information gathered depends, to some extent, on the type and mission of the Institution. The following are of interest:*

- *key performance indicators*
- *student population profile*
- *student progression, success and drop-out rates*
- *student satisfaction with their programme(s)*
- *availability of learning resources and student support*
- *career paths of graduates*

*A number of methods may be used for collecting information. It is important that students and staff are involved in providing and analysing information and planning follow-up activities.*

### Study Programme Compliance

UP presented a large collection of indicators both annual and as a function of entrance year including the Department admission grade, Department student preference, women/men student ratio, duration of studies, graduation grade. The admission grade is high (>17.000), and all other indicators are satisfactory. The Department collects the various indicators to monitor progress over the years.

Few students place UP as their first choice, while UP is one of the top 3-5 choices. In comparison with other Biology programmes, UP attracts a large number of candidates originally aiming for Medical and Pharmacology studies. This ensures a high quality of students entering the Biology programme. A big percentage of students are originated outside of Peloponnesus, thus reflecting the good reputation of UP nationally and its recognition as one of the best Biology Departments in Greece.

Most students take longer than 4 years to complete their studies: the majority acquires their Diploma in 5 years (65%), the rest in more than 5 years. In the last years this average time to graduation has dropped and AP believes that this is a good improvement, since the pace of graduation on time is accelerating and concerns all constituents (students and academic players).

The UP and the Department have established clear and efficient mechanisms for collecting and analysing information regarding student evaluation (satisfaction). All subjects completed in the Department are evaluated via electronic questionnaires. The results are used by the Department to inform its curriculum changes. Although the Department tries to collect information from all students, only 15-25% of them are involved in this evaluation process. Therefore, this information collecting system fails to capture student feedback and this is an area of concern.

Instructional resources are available through the web and the Study Guide is provided to all students. The central library also provides all needed resources (books and scientific magazines, e-class). From the conversation with the students and inspection of the web site, the AP believes that learning resources are appropriate.

UP and the Department have established procedures for the collection of data regarding career paths of graduates and employability. Career paths are varied, and the employable options are reflected in the curriculum choices.

### Panel Judgement

<b>Principle 7: Information Management</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

The Department has established and operates a clear and functional information system for the management and monitoring of data concerning students, teaching staff, courses, teaching and provision of services to students. However, the process for determining the student satisfaction survey seems not effective due to lack of student involvement. According to our previous experience this is a common problem within other Biology Departments. However, some of these Departments have managed to achieve higher completion rates in relevant surveys. Our recommendation is for OMEA in collaboration with MODIP to take responsibility and exploit different ways to engage successfully with the students, even outside the standard regulatory framework. For example, course satisfaction questionnaires could be given during laboratory courses.

Efforts should be directed towards enhancing the communication between students and MODIP/OMEA overseeing quality of studies in order to obtain a satisfactory evaluation outcome.

An UP alumni platform already exists, however connections between the Department and the alumni (graduates) should be established and enhanced.

Enhance the already existing collaboration between UP Departments (Medical School, Chemistry, Agronomy, Pharmacy, Research Centres) and local Industry in order to enrich the curriculum and increase students' hiring opportunities. Therefore, the enhanced collaboration between the Department and local/regional or/and national employers must be further encouraged.

## Principle 8: Public Information

**INSTITUTIONS SHOULD PUBLISH INFORMATION ABOUT THEIR TEACHING AND ACADEMIC ACTIVITIES WHICH IS CLEAR, ACCURATE, OBJECTIVE, UP-TO-DATE AND READILY ACCESSIBLE.**

*Information on Institution's activities is useful for prospective and current students, graduates, other stakeholders and the public.*

*Therefore, institutions and their academic units provide information about their activities, including the programmes they offer, the intended learning outcomes, the qualifications awarded, the teaching, learning and assessment procedures used, the pass rates and the learning opportunities available to their students, as well as graduate employment information.*

### Study meme Compliance

Information on current programmes of the Department is provided in the UP website. The content of the course descriptions and the courses themselves are clearly presented. The quality of the teaching material available on the web is of high quality.

UP and the Department disseminate information about academic events and seminars linked to Biology. Information of a number of other UP and Departmental activities is also available on the web site.

Information includes the overall guide for undergraduate studies and the description of the Department, information about the personnel, courses, areas of focus, Erasmus+ mobility, student advisors, hours and resources of the library, and publications.

This site it is clear, well-constructed, and translated in English, ensuring the Department's higher visibility. The UP website also dedicates a page on the Erasmus+ students and staff mobility, that provides the requirements to participate in these programmes. The availability of key quality indicators of teaching staff on the website is informative and the CVs are up to date.

Information about courses, ethics etc. is available online and includes the number of ECTS of each course and practical exercise, the timetable, the instructor, and the mode of instruction, and finally the method of assessment. This information is up-to-date and easily accessible and the Department's web pages are user-friendly.

### Panel Judgement

Principle 8: Public Information	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	



## **Panel Recommendations**

The alumni network that has been created recently by UP is a commendable and highly effective way for current students to connect with alumni of the programme (for information and networking). However, at the present time this site is not well used. It is highly recommended to promote and activate this excellent tool.

Although the Department obtains important distinctions, the information is not always promoted and communicated as much as it should be. It would be important for the visibility of UP and the Department to advertise such events more effectively.

## **Principle 9: On-going Monitoring and Periodic Internal Review of Programmes**

**INSTITUTIONS SHOULD HAVE IN PLACE AN INTERNAL QUALITY ASSURANCE SYSTEM FOR THE AUDIT AND ANNUAL INTERNAL REVIEW OF THEIR PROGRAMMES, SO AS TO ACHIEVE THE OBJECTIVES SET FOR THEM, THROUGH MONITORING AND AMENDMENTS, WITH A VIEW TO CONTINUOUS IMPROVEMENT. ANY ACTIONS TAKEN IN THE ABOVE CONTEXT SHOULD BE COMMUNICATED TO ALL PARTIES CONCERNED.**

*Regular monitoring, review and revision of study programmes aim to maintain the level of educational provision and to create a supportive and effective learning environment for students.*

*The above comprise the evaluation of:*

- *the content of the programme in the light of the latest research in the given discipline, thus ensuring that the programme is up to date;*
- *the changing needs of society;*
- *the students' workload, progression and completion;*
- *the effectiveness of the procedures for the assessment of students;*
- *the students' expectations, needs and satisfaction in relation to the programme;*
- *the learning environment, support services and their fitness for purpose for the programme*

*Programmes are reviewed and revised regularly involving students and other stakeholders. The information collected is analysed and the programme is adapted to ensure that it is up-to-date. Revised programme specifications are published.*

### **Study Programme Compliance**

There is regular monitoring and revision of the study programme that is delivered by the Undergraduate Programme Committee, the General Assembly and OMEA. OMEA leads on the collection, analysis and evaluation of research indicators, course satisfaction questionnaires and internal evaluation report. Therefore, the study programme assessment is performed according to the quality principles as required by HAHE. Input from additional groups such as undergraduate and graduate students, alumni, and stakeholders could help identify changing societal needs and evolve the curriculum is desirable.

Monitoring of student workload and progression is generally satisfactory. The present and past students of the Department were very appreciative of the hard work that the staff put into teaching and mentoring. This is a very strong point that reveals the teaching excellence of the Department.

The procedures for evaluating student performance are in line with expectations. Mechanisms identifying individual student interests (research, teaching, industry oriented) are not evident. However, the Department has established guidelines for those students wishing to obtain a certificate of teaching ability.

Student expectations, needs, and satisfaction are assessed via the electronic evaluation of each course. The overall course satisfaction indicated by the students is high. An

indirect way to assess student satisfaction is market placement and career prospects of recent graduates.

Most laboratories appeared to be spacious, clean, and reasonably well equipped.

Delivery of the curriculum by research active staff ensures lectures enriched with the latest discoveries and advances in the respective fields.

Appropriate actions are taken to identify and address issues of the changing needs of society. During events aiming at a lay audience, there could be stronger efforts to discuss general issues of societal concern and needs with the participation of the audience.

Monitoring of students' workload and progression is satisfactory, and pursued via the faculty advisor programme. The effectiveness of the procedures for evaluation of students' performance is regularly discussed.

Students' expectations, needs and satisfaction are addressed via the electronic evaluations for each course. It is worth noting that the interaction and communication between students and staff members is excellent.

The UP campus offers a stimulating learning environment with ample opportunities for participating in a wide range of learning activities within other Departments of UP.

### Panel Judgement

<b>Principle 9: On-going Monitoring and Periodic Internal Review of Programmes</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

More accurate assessments should be made to match students' expectations, needs and satisfaction with the programme. MODIP may need to be more involved in ensuring effectiveness of the monitoring programme and its implementation in the improvement of the curriculum.

It is recommended to ideally involve students, alumni and external stakeholders during the programme content review and discuss what additional areas of knowledge / expertise they wish to see in the students. This could be realised through an informal advisory team.

Convene meetings with recent and older graduates of the Department working abroad to get their opinion on additional courses that need to supplement the curriculum based on their experience.

Strongly consider the possibility to introduce new subjects (Stem Cells, Computational Biology) that reflect current trends (Regenerative Biology, Bioinformatics).

Invite academics from abroad (e.g. alumni) to give specific seminars via Zoom links.

It is recommended that programme content review continues on a regular basis and ideally includes the involvement of students. If student representatives cannot be persuaded to attend, open meetings with whole year cohorts may be attempted in order to discuss course content in a general way.

## Principle 10: Regular External Evaluation of Undergraduate Programmes

**PROGRAMMES SHOULD REGULARLY UNDERGO EVALUATION BY COMMITTEES OF EXTERNAL EXPERTS SET BY HAHE, AIMING AT ACCREDITATION. THE TERM OF VALIDITY OF THE ACCREDITATION IS DETERMINED BY HAHE.**

*HAHE is responsible for administrating the programme accreditation process which is realised as an external evaluation procedure, and implemented by a committee of independent experts. HAHE grants accreditation of programmes, with a specific term of validity, following to which revision is required. The accreditation of the quality of the programmes acts as a means of verification of the compliance of the programme with the template's requirements, and as a catalyst for improvement, while opening new perspectives towards the international standing of the awarded degrees.*

*Both academic units and institutions participate in the regular external quality assurance process, while respecting the requirements of the legislative framework in which they operate.*

*The quality assurance, in this case the accreditation, is an on-going process that does not end with the external feedback, or report or its follow-up process within the Institution. Therefore, Institutions and their academic units ensure that the progress made since the last external quality assurance activity is taken into consideration when preparing for the next one.*

### Study Programme Compliance

This is the first external accreditation of the programme. The process was conducted in an exemplary fashion at all stages, from the ready availability of the relevant material to the interview processes. The AP was given the opportunity to interview in depth with all stakeholders and was provided with the requested assistance.

The Department has provided detailed responses to the recommendations emanating from the external evaluation that took place in December 2013 and presented all actions taken in response to the recommendations of that evaluation, thus complying by at least 80% to those recommendations. Specific quantitative improvements in reduction in number of courses, avoidance of content overlaps, shortening graduation time, increasing graduation final grade, and increasing extramural fundraising were noted.

### Panel Judgement

Principle 10: Regular External Evaluation of Undergraduate Programmes	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### **Panel Recommendations**

The AP has no further recommendations in this Principle.

## **PART C: CONCLUSIONS**

### **I. Features of Good Practice**

- UP is recognised nationally and internationally for contemporary University education and research in the field of Biology.
- The Department shares the campus with the Medical School, Engineering, Natural Sciences, and other Departments of UP.
- Follow-up of the career paths of graduates and development of an alumni community.
- Clear evidence that the relationship between students and teachers is based on mutual respect and appreciation.
- UP Faculty and administrators appear enthusiastic and strongly committed to ensure high quality of student support services.
- UP has well-established procedures ensuring the completion of higher education degrees (e.g. duration of studies, rules ensuring student progression, terms and conditions for student mobility).
- The recruitment procedures are fair, meritocratic, and transparent and there is no evidence of institutional inbreeding.
- There is a very strong employability potential of the undergraduate cohorts.
- Research quality and quantity outputs are considered good to very good.
- There is willingness by the Department to comply with evaluation procedures.
- The staff is dedicated, enthusiastic, dealing with all teaching duties and involved in research activities.
- A good number of the staff members are involved in successful research grant applications.
- There is awareness of the importance of research impact, especially among recent hires.
- The library is functional and well equipped.
- Stakeholders showed great interest in pursuing further existing academic/industrial partnerships generally with UP and more specifically with the Department.
- Excellent sport and culture facilities.

### **II. Areas of Weakness**

- As in most Greek Universities, formal mentoring of the new Faculty is an unknown practice.
- Although UP tries to collect information from 100% of the students' satisfaction, only 20% of the students are involved in this process.

- Academic mobility, including sabbatical leaves, is very low.
- A structured communication strategy towards the society at large is missing.

### III. Recommendations for Follow-up Actions

Recommendations for follow-up actions have been detailed in each of the ten principles of the accreditation. The AP wishes to highlight the following actions:

- Successful career paths for Department graduates are dependent on an appropriate legal framework that establishes employability rights into law (επαγγελματικά δικαιώματα Βιολόγων). The AP firmly requests to the Education Ministry and other relevant authorities to resolve the soonest this issue that has been highlighted multiple times in previous evaluations.
- The Department should expand the number of incoming foreign students taking part in the Erasmus+ programme since this will increase the international profile of the staff and may lead to closer cooperation with Departments abroad. The University ranking also depends on attracting foreign students. In addition, the AP encourages the Department and most particularly UP to enhance mobility of the staff to keep up with emerging trends in teaching and education in general.
- OMEA and MODIP should exploit different ways to engage successfully with the students' course satisfaction surveys, even outside the standard regulatory framework. For example, course satisfaction questionnaires could be given during mandatory laboratory courses. The Department should encourage and reward excellence when students are attending competitions, workshops conferences and expose their knowledge and skills. Efforts should be directed towards enhancing the profile of OMEA and MODIP overseeing quality of studies. The AP additionally recommends involving the students during the process of programme content review. Strongly consider the possibility to introduce new subjects such as Stem Cell Biology and Computational Biology that reflect current trends in the biomedical field. Therefore, the AP encourages the creation and function of an informal consulting committee of senior staff members that will include students, outside stakeholders and alumni in order to adapt and develop the strategic plans for the Department's future needs and identity. Novel topics in Biology, such as using AI in teaching and research as well as entrepreneurial or regulatory activities could be promoted by assigning corresponding ECTS-points to an elective course.
- The AP strongly encourages the Department and UP to revisit and further develop their communication plan towards academics, local authorities, local and national decision-makers, industrial partners, and the international academic community. Several examples are given below: 1) Enhance the functionality of the already existing alumni UP platform and promote the communication of important alumni members (graduates) with the students and staff. Additionally, this platform can be used for the organisation of seminars given by alumni members via Zoom on a regular basis. 2) Important national and international distinctions should be communicated to the Greek and international academic community, to the local society, as well as at a national level, using all possible media such as television (local and national), newspapers, social media and other



communication platforms. The Department and the UP should be proactive and totally engaged towards this direction. For example, it will be an excellent initiative if academics from the Department and UP could inform the public about their academic activities and transfer their deep knowledge to the local society by having 1 or 2 weekly spots in the local television network. In this way, they will have the possibility to reveal to the broad public the significance of their research in generally important and often neglected issues such as the uniqueness and fragility of the local environment, the importance of the plant and animal diversity, the genetic and cellular implications in cancer initiation and possible treatment etc. This could be also realised through regular articles (e.g. one article each Sunday) in the local newspapers. 3) Relocate the two already existing museums in the city centre, in one of the abandoned neoclassical buildings belonging to the state. This will allow great visibility and inform indirectly the local society about the importance of the work carried out in the Department in this field. The entrance could be free one day per week for families and schools.

- The Department is encouraged to work closely with the newly established Office of Teaching and Learning (possibly in collaboration with the Centre for Continuing Education and Lifelong Learning (ΚΕΔΙΒΙΜ) of the University) supporting the Faculty Members with the new teaching methods, including the advantages (and risks) of AI.
- The Department should strive to appoint new, highly competitive Faculty members (hopefully close to a projected total of 30 over the next five years) plus additional laboratory instructors (ΕΔΙΠ) and technical specialists (ΕΤΕΠ).

#### IV. Summary & Overall Assessment

The Principles where full compliance has been achieved are: **1, 2, 3, 4, 6, 7, 8, 9 and 10.**

The Principles where substantial compliance has been achieved are: **5.**

The Principles where partial compliance has been achieved are: **None.**

The Principles where failure of compliance was identified are: **None.**

Overall Judgment	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

## The members of the External Evaluation & Accreditation Panel

**Name and Surname**

**Signature**

- 1. Prof. Thimios Mitsiadis (Chair)**  
Universität Zürich, Switzerland
- 2. Prof. Emeritus Spiros Agathos**  
Université Catholique de Louvain, Belgium
- 3. Prof. Karen Angeliki Krogfelt**  
Roskilde Universitet, Denmark
- 4. Mr Georgios Noutsos (student)**  
National and Kapodistrian University of Athens, Greece