

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ



**Εθνική Αρχή Ανώτατης Εκπαίδευσης** Hellenic Authority for Higher Education

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# Accreditation Report for the Postgraduate Study Programme of:

MSc in Applied Statistics

**Department: Statistics** 

Institution: Athens University of Economics and Business Date: 13/06/2024







# NOTES

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Report of the Panel appointed by the HAHE to undertake the review of the Postgraduate Study Programme of **MSc in Applied Statistics** of the **Athens University of Economics and Business** for the purposes of granting accreditation

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# PART A: BACKGROUND AND CONTEXT OF THE REVIEW

# I. The External Evaluation & Accreditation Panel

The Panel responsible for the Accreditation Review of the postgraduate study programme of MSc in Applied Statistics of the **Athens University of Economics and Business** comprised the following five (5) members, drawn from the HAHE Register, in accordance with Laws 4009/2011 & 4653/2020:

 SALONITIS KONSTANTINOS (Chair) (*Title, Name, Surname*) Cranfield University (Institution of origin)

# 2. ANGELIS JANNIS

(Title, Name, Surname) KTH Royal Institute of Technology (Institution of origin)

# 3. NIKOLERIS GIORGOS

(Title, Name, Surname) Lund University (Institution of origin)

# 4. STYLIANOPOULOS NIKOS

(Title, Name, Surname) Department of Mathematics and Statistics, University of Cyprus (Institution of origin)

#### 5. Zamanidis Konstantinos

(Title, Name, Surname) University of Western Macedonia (Institution of origin)

#### II. Review Procedure and Documentation

Please refer briefly to the Panel preparation for the postgraduate study programme review, as well as to the documentation provided and considered by the Panel. State the dates of the review and describe the review and the meetings held. Feel free to mention any additional information regarding the procedure, as appropriate.

The Hellenic Authority for Higher Education (HAHE) defined an External Evaluation & Accreditation Panel (EEAP) of experts for the accreditation of the Postgraduate Study Programme (PSP) in Applied Statistics offered by the Department of Statistics of the Athens University of Economic and Business (AUEB) in accordance with the HAHE Quality Assurance (QA) requirements. The method was based on sampling the department's activities to evaluate the fulfilment of the HAHE principles and comment on its compliance, effectiveness, efficiency and applicability concerning the chosen requirements.

The EEAP reviewed the material provided by HAHE in advance of the evaluation week, including documentation regarding the HAHE mission and standards and guidelines for Quality Accreditation (QA) of postgraduate programmes in operation. Additionally, the EEAP reviewed the documentation prepared by the department and found it of high quality.

The review process was carried out from June 3rd to 7th, 2024, and the whole process, including the submission of the Accreditation Report, was completed on Saturday, June 8th, 2024. The evaluation and assessment were conducted remotely (online via Zoom teleconferences).

On June 3rd, EEAP members met via Zoom to discuss the QA accreditation process's standards and guidelines and agree on the logistics associated with compiling the report.

Following that, EEAP members met with the Vice Rector of Academic Affairs & Personnel (who also, within his role, serves as the president of the Quality Assurance Unit - QAU), the director of the PSP in Applied Statistics, the Head of the Statistics Department, a member of the department's Internal Evaluation Team (OMEA) and the supervisor of the QAU. The Rector of the University briefly welcomed the EEAP members. In the meeting, the director of the PSP in Statistics was also present, as the two PSPs were assessed in parallel. During the meeting, both PSP directors presented briefly an overview of the history of the two programmes. The presentations were followed by an informative discussion.

Afterwards, the EEAP evaluated the facilities and learning resources through a series of videos provided by the department.

On June 5th, the schedule consisted of five meetings:

- A meeting was held with five academics from the department who deliver lectures in the programme. The discussion focused on professional development opportunities, mobility, and their perception of the department's competence and adequacy to successfully deliver of the intended learning outcomes. The discussion also addressed the staff's workload and how their research outcomes are linked to their teaching.

- EEAP met with five current students in the programme. Since the course is part-time, the students met were in various stages of their studies. They also had different backgrounds, from military health, sports and engineering. The students interviewed thus made for a good sample of the cohort. The discussion focused on their satisfaction with their study experience. It also covered the degree to which their input is considered in quality assurance and priority issues concerning student life and welfare. The students, in general, were very positive about their experience and commented positively on the good balance between theory and practice – with the focus being on applied statistics.

- A meeting was held with five recent graduates. The discussion was on their experience of their postgraduate studies. Since all graduates also worked while studying, the discussion addressed the work-study-life balance.

- EEAP met with five external stakeholders, including senior leaders in the private and public sectors. The discussion focused on better understanding their relations with the department and the programme.

- A final closure meeting was held with the Director of the PSP, the head of the department, the Vice-Rector of Academic Affairs and personnel, and representatives from the QAU and OMEA. During this meeting, the EEAP briefly presented their key findings.

During the day, the EEAP met in private several times to reflect on the discussions and start the preparation of the accreditation report following the procedures provided by HAHE.

#### III. Postgraduate Study Programme Profile

Please provide a brief overview of the postgraduate study programme with reference to the following: history, academic remit, duration of studies, qualification awarded, employment opportunities, orientation challenges or any other key background information. Also, you may provide a short description of the home Department and Institution, with reference to student population, campus or any other facts, as deemed appropriate.

The PSP in Applied Statistics was established in 2018. The program provides specialised knowledge at the postgraduate level to graduates of Greek and foreign Universities in the basic fields of Statistics and Probability. The program's objective is to train postgraduate students in the following fields:

Data Analysis
Biostatistics
Big Data and Computational Statistics
Applied Probability

The program aims to create specialised scientists in fields compatible with the research activity, the respective specialisation fields of the undergraduate program and the department's faculty. It also focuses on educating senior executives of companies and organisations in the private and public sectors to meet the needs of their specialized activities in data analysis.

The programme is structured as a two-and-a-half-year part-time study programme. Four optional courses are offered in the third and fourth semesters. A student is required to complete 12 courses (60 ECTS) and a Masters thesis (30 ECTS). The programme also offers a study stream leading to a European Master in Official Statistics (EMOS) certification.

The department provides a detailed Study Guide to ensure students understand the program. In addition, course syllabi for all taught courses are available on the department's web page. Students are expected to evaluate the courses they attend, and their input is considered when adjusting course content and delivery aspects.

The programme has established an external advisory board composed of senior managers from public and private companies and academics from international universities. The advisory board assembles annually and provides suggestions on academic matters and programme management improvements.

# **PART B: COMPLIANCE WITH THE PRINCIPLES**

PRINCIPLE 1: QUALITY ASSURANCE POLICY AND QUALITY GOAL SETTING FOR THE POSTGRADUATE STUDY PROGRAMMES OF THE INSTITUTION AND THE ACADEMIC UNIT

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 THE POSTGRADUATE STUDY PROGRAMMES OF THE INSTITUTION AND THE ACADEMIC UNIT. THIS POLICY SHOULD BE PUBLISHED AND IMPLEMENTED BY ALL STAKEHOLDERS.

The quality assurance policy of the academic unit should be in line with the quality assurance policy of the Institution and must be formulated in the form of a public statement, which is implemented by all stakeholders. It focuses on the achievement of special goals related to the quality assurance of the study programmes offered by the academic unit.

Indicatively, 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 postgraduate study programme (PSP), its purpose and field of study; it will realise the programme's goals and it will determine the means and ways for attaining them; it will implement appropriate quality procedures, aiming at the programme's improvement.

In particular, in order to implement 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 postgraduate study programmes
- *b)* the pursuit of learning outcomes and qualifications in accordance with the European and National Qualifications Framework for Higher Education level 7
- c) the promotion of the quality and effectiveness of teaching at the PSP
- d) the appropriateness of the qualifications of the teaching staff for the PSP
- *e)* the drafting, implementation, and review of specific annual quality goals for the improvement of the PSP
- f) the level of demand for the graduates' qualifications in the labour market
- g) the quality of support services, such as the administrative services, the libraries and the student welfare office for the PSP
- *h)* the efficient utilisation of the financial resources of the PSP that may be drawn from tuition fees
- *i)* the conduct of an annual review and audit of the quality assurance system of the PSP through the cooperation of the Internal Evaluation Group (IEG) with the Institution's Quality Assurance Unit (QAU)

#### Documentation

- Quality Assurance Policy of the PSP
- Quality goal setting of the PSP

#### **Study Programme Compliance**

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. <u>Findings</u>, <u>analysis of judgement</u> and <u>conclusions</u> should be developed below in <u>three distinct parts</u>.

# I. Findings

The EEAP assessment is that the study programme's structure and organisation are well organised and considered. The current students interviewed by the EEAP expressed satisfaction with the programme and stated that they were regularly asked for input into the quality assurance system. The qualifications of the teaching staff involved in the delivery of the PSP are significant and satisfactory for the programme. For all PSP courses, there are plans to ensure teaching delivery in case of faculty sabbaticals, illness or similar reasons. Faculty also discuss and share course information to ensure a smooth transition. The programme's Director, in cooperation with the OMEA and in accordance with QAU's guidelines, is regularly drafting, implementing and reviewing specific quality goals for improving the PSP. The programme, thus, is consistent with the quality assurance requirements of HAHE, goal setting, and the academic unit's endeavour to achieve excellence in the teaching and delivery of the programme.

#### II. Analysis

The EEAP found that the PSP quality goals are set and revisited annually, systematically and in a structured way. This is done following the established processes. The goals are communicated to all faculty members, and discussions are held between faculty and administration to ensure that the quality goalsremain relevant as subject, and market needs change. The graduates of the PSP are well received in the labour market, as seen by the close and formal collaborations with industry and governmental bodies. This indicates that the PSP graduates are well-educated in the programme and suitable for successful employment in various sectors.

#### III. Conclusions

The EEAP finds that the PSP is fully compliant to Principle 1.

#### **Panel Judgement**

Please tick one of the following:

Principle 1: Quality assurance policy and quality goal setting		
for the postgraduate study programmes of the institution		
and the academic unit		
Fully compliant	X	
Substantially compliant		
Partially compliant		
Non-compliant		

#### **Panel Recommendations**

*Please provide your recommendations with regard to issues that need to be addressed, as appropriate.* 

#### R1.1 - Annually revisit the PSP goals to keep the programme relevant.

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#### PRINCIPLE 2: DESIGN AND APPROVAL OF POSTGRADUATE STUDY PROGRAMMES

INSTITUTIONS SHOULD DEVELOP THEIR POSTGRADUATE STUDY PROGRAMMES FOLLOWING A DEFINED WRITTEN PROCESS WHICH WILL INVOLVE THE PARTICIPANTS, INFORMATION SOURCES AND THE APPROVAL COMMITTEES FOR THE POSTGRADUATE STUDY PROGRAMMES. THE OBJECTIVES, THE EXPECTED LEARNING OUTCOMES AND THE EMPLOYMENT PROSPECTS ARE SET OUT IN THE PRORAMME DESIGN. DURING THE IMPLEMENTATION OF THE POSTGRADUATE STUDY PROGRAMMES, THE DEGREE OF ACHIEVEMENT OF THE LEARNING OUTCOMES SHOULD BE ASSESSED. THE ABOVE DETAILS, AS WELL AS INFORMATION ON THE PROGRAMME'S STRUCTURE ARE PUBLISHED IN THE STUDENT GUIDE.

The academic units develop their postgraduate study programmes following a well-defined procedure. The academic profile and orientation of the programme, the research character, the scientific objectives, the specific subject areas, and specialisations are described at this stage.

The structure, content and organisation of courses and teaching methods should be oriented towards deepening knowledge and acquiring the corresponding skills to apply the said knowledge (e.g. course on research methodology, participation in research projects, thesis with a research component).

The expected learning outcomes must be determined based on the European and National Qualifications Framework (EQF, NQF), and the Dublin Descriptors for level 7. During the implementation of the programme, the degree of achievement of the expected learning outcomes and the feedback of the learning process must be assessed with the appropriate tools. For each learning outcome that is designed and made public, it is necessary that its evaluation criteria are also designed and made public.

In addition, the design of PSP must consider:

- the Institutional strategy
- the active involvement of students
- the experience of external stakeholders from the labour market
- the anticipated student workload according to the European Credit Transfer and Accumulation System (ECTS) for level 7
- the option of providing work experience to students
- the linking of teaching and research
- the relevant regulatory framework and the official procedure for the approval of the PSP by the Institution

The procedure of approval or revision of the programmes provides for the verification of compliance with the basic requirements of the Standards by the Institution's Quality Assurance Unit (QAU).

#### Documentation

- Senate decision for the establishment of the PSP
- PSP curriculum structure: courses, course categories, ECTS awarded, expected learning outcomes according to the EQF, internship, mobility opportunities
- Labour market data regarding the employment of graduates, international experience in a relevant scientific field
- PSP Student Guide
- Course and thesis outlines

 Teaching staff (name list including of areas of specialisation, its relation to the courses taught, employment relationship, and teaching assignment in hours as well as other teaching commitments in hours)

#### **Study Programme Compliance**

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. <u>Findings</u>, <u>analysis of judgement</u> and <u>conclusions</u> should be developed below in <u>three distinct parts</u>.

# I. Findings

The PSP was designed by its Steering Committee from the AUEB, Department of Statistics, and approved by the Departmental General Assembly. It is revised by a national committee of experts from academia and officials from companies and the government. The EEAP believes that the overall PSP structure is a role model for Greece and aligns well with similar programmes overseas. The EEAP found no evidence of students' or social partners' involvement in the devolvement of the curriculum. The Study Guide is complete, concise, appropriate, and well thought out. The entire process, including program revisions, is overseen by the QAU. During the discussions with students and alumni, it was clear that they would appreciate it if internships were offered as electives.

#### II. Analysis

The program's success is evident by the number of graduates who succeed in the labour market. Students and stakeholders attribute this achievement to the PSP's perfect balance between theory and practice. The program of study, which requires 90 ECTS for the degree, has a compulsory Masters Thesis amounting to30 ECTS. The programme offers the option of a European Master in Official Statistics (EMOS), certified by Eurostat in 2022. Most of the students are offered promotions or better jobs after graduation.

#### III. Conclusions

This PSP is a highly regarded programme amongst present students and graduates, external stakeholders from the labour market and social partners. The option of EMOS certificate is highly commendable.

#### **Panel Judgement**

Please tick one of the following:

Principle 2: Design and approval of postgraduate study		
programmes		
Fully compliant	Х	
Substantially compliant		
Partially compliant		
Non-compliant		

#### **Panel Recommendations**

Please provide your recommendations with regard to issues that need to be addressed, as appropriate.

R2.1 - The PSP should consider establishing a feedback mechanism involving alumni and stakeholders for the continuous improvement of the PSP.

R2.2 - The PSP should allow elective courses from other Masters programmes within the AUEB.

R2.3 - An internship program should be initiated for unemployed students

#### PRINCIPLE 3: STUDENT-CENTRED LEARNING, TEACHING, AND ASSESSMENT

# INSTITUTIONS SHOULD ENSURE THAT POSTGRADUATE STUDY PROGRAMMES PROVIDE THE NECESSARY CONDITIONS TO ENCOURAGE STUDENTS TO TAKE AN ACTIVE ROLE IN THE LEARNING PROCESS. THE ASSESSMENT METHODS SHOULD REFLECT THIS APPROACH.

Student-centred learning and teaching plays an important role in enhancing students' motivation, their self-evaluation, and their active participation 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 by adopting 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
- strengthens 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 the students' complaints
- provides counselling and guidance for the preparation of the thesis

#### 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.
- Assessment is consistent, fairly applied to all students and conducted in accordance with the stated procedures.
- A formal procedure for student appeals is in place.
- The function of the academic advisor runs smoothly.

#### Documentation

- Sample of a fully completed questionnaire for the evaluation of the PSP by the students
- Regulations for dealing with students' complaints and appeals
- Regulation for the function of academic advisor
- Reference to the teaching modes and assessment methods

#### **Study Programme Compliance**

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. <u>Findings, analysis of judgement</u> and <u>conclusions</u> should be developed below in <u>three distinct parts</u>.

#### I. Findings

The program offers a flexible and comprehensive curriculum regularly updated to reflect current trends. Several study paths are available, including Data Analysis, Biostatistics, Big Data and Computational Statistics, and Applied Probability.

Students have access to e-class, where lectures, notes, e-books, and all other necessary materials are available. There are 14 elective courses, out of which four are selected in the fourth semester. Student evaluation differs from course to course in different formats, such as traditional written or oral exams and assignment submissions. Assessment methods are clarified in advance and are available in e-class. Care is taken for students with special needs. Courses are evaluated once every semester through questionnaires prepared for the task by the Quality Assurance Unit (QAU).

Complaints, comments, recommendations, or remarks concerning the quality of educational services can be submitted electronically and treated officially.

An external Advisory Committee participates in the development of the curriculum.

Finally, the Academic Advisor ensures that the students receive guidance on present or future studies and career opportunities.

#### II. Analysis

The structure of the studies and the resources available to the students are excellent.

Complaints are treated officially and thoroughly through electronic means.

It is, however, crucial that the newly established complaint system is widely communicated and known to the students.

#### III. Conclusions

The program is student-centred with all necessary resources available to the students.

#### **Panel Judgement**

Please tick one of the following:

Principle 3: Student	-centred le	arning,
teaching, and assessmen	t	
Fully compliant		Х
Substantially compliant		
Partially compliant		

Non-compliant	
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# **Panel Recommendations**

Please provide your recommendations with regard to issues that need to be addressed, as appropriate.

R3.1 – Communicate the newly established complaint system to the wider body of the students.

PRINCIPLE 4: STUDENT ADMISSION, PROGRESSION, RECOGNITION OF POSTGRADUATE STUDIES, AND CERTIFICATION.

INSTITUTIONS SHOULD DEVELOP AND APPLY PUBLISHED REGULATIONS COVERING ALL ASPECTS AND PHASES OF STUDIES (ADMISSION, PROGRESSION, THESIS DRAFTING, RECOGNITION AND CERTIFICATION).

All the issues from the beginning to the end of studies should be governed by the internal regulations of the academic units. Indicatively:

- the student admission procedures and the required supporting documents
- student rights and obligations, and monitoring of student progression
- internship issues, if applicable, and granting of scholarships
- the procedures and terms for the drafting of assignments and the thesis
- the procedure of award and recognition of degrees, the duration of studies, the conditions for progression and for the assurance of the progress of students in their studies
- the terms and conditions for enhancing student mobility

#### All the above must be made public in the context of the Student Guide.

#### Documentation

- Internal regulation for the operation of the Postgraduate Study Programme
- Research Ethics Regulation
- Regulation of studies, internship, mobility, and student assignments
- Degree certificate template

#### **Study Programme Compliance**

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. <u>Findings</u>, <u>analysis of judgement</u> and <u>conclusions</u> should be developed below in <u>three distinct parts</u>.

I. Findings

The Study Guide, accessible through the PSP website, provides comprehensive instructions on various processes and services. A student guide is available on the PSP dedicated webpage. The program's ECTS unit count (90) falls within the expected range for postgraduate programs in Greece and the EU. The EEAP found evidence demonstrating the PSP's commitment to meeting and exceeding academic standards. The procedures and terms for the drafting of assignments and the Thesis are well-established and highly commented on by the students. Practical training (in the form of internships) is not provided, as this is a part-time programme, however, students indicated that they would like to have this opportunity, especially for unemployed ones. Employed students also highlighted that they would like alternative ways of practical training to get exposure to other working environments. No evidence of a code of research ethics for the PSP was found in the documentation or on the PSP website.

# II. Analysis

After consulting with students and external partners, the EEAP realized that the PSP produces high-quality graduates who are happy with the teaching staff and trained to meet the current needs in the job market. A shortcoming has been identified regarding the lack of a research ethics code, which should be clearly included in the thesis handbook.

#### III. Conclusions

The PSP in Applied Statistics works remarkably well and graduates many excellent students. This is reflected by the students' successful careers in various professions. However, the principle is substantially compliant due to the lack of a research ethics code.

#### **Panel Judgement**

Please tick one of the following:

Principle 4: Student admission, progression, recognition		
of postgraduate studies and certification		
Fully compliant		
Substantially compliant	Х	

Partially compliant	
Non-compliant	

#### Panel Recommendations

Please provide your recommendations with regard to issues that need to be addressed, as appropriate.

R4.1 The PSP should increase efforts to encourage stakeholders to offer scholarships to the students.

R4.2 A code of research ethics for the PSP needs to be put in place

# PRINCIPLE 5: TEACHING STAFF OF POSTGRADUATE STUDY PROGRAMMES

# INSTITUTIONS SHOULD ASSURE THEMSELVES OF THE LEVEL OF KNOWLEDGE AND SKILLS OF THEIR TEACHING STAFF, AND APPLY FAIR AND TRANSPARENT PROCESSES FOR THEIR RECRUITMENT, TRAINING AND FURTHER DEVELOPMENT.

The Institution should attend to the adequacy of the teaching staff of the academic unit teaching at the PSP, the appropriate staff-student ratio, the appropriate staff categories, the appropriate subject areas, the fair and objective recruitment process, the high research performance, the training- development, the staff development policy (including participation in mobility schemes, conferences, and educational leaves-as mandated by law).

More specifically, the academic unit should set up and follow clear, transparent and fair processes for the recruitment of properly qualified staff for the PSP 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 (with respect to attendance requirements, performance, selfassessment, training, etc.); develop policies to attract highly qualified academic staff.

#### Documentation

- Procedures and criteria for teaching staff recruitment
- Employment regulations or contracts, and obligations of the teaching staff
- Policy for staff support and development
- Individual performance of the teaching staff in scientific-research and teaching work, based on internationally recognised systems of scientific evaluation (e.g. Google Scholar, Scopus, etc.)
- List of teaching staff including subject areas, employment relationship, Institution of origin, Department of origin

#### **Study Programme Compliance**

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. <u>Findings</u>, <u>analysis of judgement</u> and <u>conclusions</u> should be developed below in <u>three distinct parts</u>.

I. Findings

The procedures for the election and promotion of teaching staff are based on current legislation and are supported electronically by the ATIEAAA system, which is supported by the Greek Ministry of Education, Religious Affairs, and Sports.

A coordinating committee drafts a teaching assignment plan that considers teaching experience in the relevant subject, relevant overall and recent research experience based on internationally recognised evaluation systems (e.g. Scopus), and student evaluations. This plan is discussed and finalised in the Department's general assembly.

At the end of each academic year, the coordinating committee makes recommendations or changes to the teaching assignments based on course evaluations. To promote good teaching, an honorary teaching award is established.

Faculty members are eligible to participate in ERASMUS+ with institutions and organisations overseas. Finally, the teaching staff of the postgraduate study programme participates in the EMOS (European Masters in Official Statistics) network.

#### II. Analysis

The procedures to ensure highly qualified faculty members follow Greek legislation and international standards. There are several actions taken to scrutinize and improve the quality of the courses and the teaching skills of the academic staff. Awards are also adopted to promote excellent practices.

The EEAP, through the discussions with teaching staff and students, is confident that there is a breadth of good practices in the teaching and learning of the students. However, no evidence of documenting and disseminating these practices in the wider academic community was found.

#### III. Conclusions

The level of knowledge and skills of the teaching staff is secured in a very satisfactory way.

#### **Panel Judgement**

*Please tick one of the following:* 

Principle 5: Teaching staff of postgraduate study programmes		
Fully compliant	Х	
Substantially compliant		
Partially compliant		
Non-compliant		

#### Panel Recommendations

*Please provide your recommendations with regard to issues that need to be addressed, as appropriate.* 

R5.1 Enhance the awards that promote excellent teaching practices.

R5.2 Facilitate the dissemination of good teaching practices across the programme, the

department and the wider university

#### **PRINICPLE 6: LEARNING RESOURCES AND STUDENT SUPPORT**

INSTITUTIONS SHOULD HAVE ADEQUATE FUNDING TO COVER THE TEACHING AND LEARNING NEEDS OF THE POSTGRADUATE STUDY PROGRAMME. THEY SHOULD –ON THE ONE HAND- PROVIDE SATISFACTORY INFRASTRUCTURE AND SERVICES FOR LEARING 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, NETWORKS, CAREER AND SOCIAL POLICY SERVICES ETC.).

Institutions and their academic units must have sufficient resources and means, on a planned and longterm basis, to support learning and academic activity in general, so as to offer PSP students the best possible level of studies. The above means include facilities such as the necessary general and more specialised libraries and possibilities for access to electronic databases, study rooms, educational and scientific equipment, IT and communication services, support and 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 students, students with disabilities), in addition to the shift towards student-centred learning and the adoption of flexible modes oflearning and teaching. Support activities and facilities may be organised in various ways, depending on the institutional context. However, the internal quality assurance proves -on the one hand- the quantity and quality of the available facilities and services, and -on the other hand- that students are aware of all available services.

In delivering support services, the role of support and administration staff is crucial and therefore this segment of staff needs to be qualified and have opportunities to develop its competences.

#### Documentation

- Detailed description of the infrastructure and services made available by the Institution to the academic unit for the PSP, to support learning and academic activity (human resources, infrastructure, services, etc.) and the corresponding firm commitment of the Institution to financially cover these infrastructure-services from state or other resources
- Administrative support staff of the PSP (job descriptions, qualifications and responsibilities)
- Informative / promotional material given to students with reference to the available services
- Tuition utilisation plan (if applicable)

#### **Study Programme Compliance**

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. <u>Findings</u>, <u>analysis of judgement</u> and <u>conclusions</u> should be developed below in <u>three distinct parts</u>.

#### I. Findings

The learning resources and support services available to the students are provided by the department or by the university. They include physical infrastructure facilities, academic and administrative services and social and other advisory services. The programme shares the use of the library, which provides access to various databases and electronic access to publications, books, and academic journals. These facilities fit the needs of the PSP. The students interviewed by the EEAP indicated that they are satisfied with the resource support and accessibility they have. Resources are adjustable as needed and can cater to small classes of a handful of students and larger student groups, which provides PSP flexibility in offered courses and their delivery format. The interviewed students stated that the faculty supports students who join the programme to update their statistics theory foundations if needed. There is also a well-established relationship with Hellenic Statistical Authority (ELSTAT), providing data access to set courses.

#### II. Analysis

The EEAP found the measures in place to ensure sufficient learning resources and availability of student support. Students can access relevant journals and databases for the PSP courses and Masters Thesis. PSP courses are mainly taught by individual staff, but since there is an overlay in staff expertise, faculty do collaborate on courses for redundancies as well as for sharing views and best practices. External lecturers are also used for more practical subjects. Given that students are employed, the current and former students interviewed by the EEAP expressed positively how accessible and flexible the faculty was in ensuring that learning objectives were met and that the course content remained relevant.

#### III. Conclusions

Overall, the EEAP finds that the resources and processes are appropriate to successfully deliver the PSP and for the faculty to deliver high-quality teaching.

#### **Panel Judgement**

Please tick one of the following:

Principle 6: Learning resources and s support	student
Fully compliant	Х
Substantially compliant	
Partially compliant	
Non-compliant	

#### **Panel Recommendations**

Please provide your recommendations with regard to issues that need to be addressed, as appropriate.

R6.1 – Continue and strengthen the ongoing collaborations with organisations, for instance, through dedicated public seminars or research events.

#### **PRINCIPLE 7: INFORMATION MANAGEMENT**

# INSTITUTIONS BEAR FULL RESPONISBILITY FOR COLLECTING, ANALYSING AND USING INFORMATION, AIMED AT THE EFFICIENT MANAGEMENT OF POSTGRADUATE STUDY PROGRAMMES AND RELATED ACTIVITIES, IN AN INTEGRATED, EFFECTIVE AND EASLILY 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.

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

The information collected 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 programmes
- availability of learning resources and student support

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

#### Documentation

- Report from the National Information System for Quality Assurance in Higher Education (NISQA) at the level of the Institution, the department, and the PSP
- Operation of an information management system for the collection of administrative data for the implementation of the PSP (Students' Record)
- Other tools and procedures designed to collect data on the academic and administrative functions of the academic unit and the PSP

#### **Study Programme Compliance**

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. <u>Findings</u>, <u>analysis of judgement</u> and <u>conclusions</u> should be developed below in <u>three distinct parts</u>.

I. Findings

The PSP data collection follows the process set by OMEA and is in accordance with the objectives of the quality assurance policy under the directions of QAU and those of HAHE Standards of Quality Assurance. Information on student admissions, population profiles, academic progressions, success rates and student course evaluations are collected periodically and systematically. The staff use the teaching management system (e-class) to upload material for their courses and communicate with the students on other academic matters through email or online access. Technical resources are fit for purpose in terms of student access to materials, communicating with faculty, and tracking student results and progression in the programme. The information gathered relates to course content and structure, teaching staff, student satisfaction and availability of learning resources and student support. Student satisfaction is monitored by questionnaires for each course and each semester. The responses collected and the student comments to the EEAP are very positive for the PSP and its faculty. The EEAP noted that the PSP students interviewed, who have professional work experience of at least a few years, viewed the PSP information management in place as favourable. They also viewed the faculty and administration as being accessible and supportive.

#### II. Analysis

The information management system collects and allows for reliable data assessment on student and programme activities and results. Key indicators are tracked. Information is available on the department website for students interested in the PSP. The PSP can collect and analyse reliable and relevant data through its information-collecting system. The information ensures that the PSP courses and management function well by identifying areas of best practice and areas that need further improvement. Student performance is monitored from registration to graduation, focusing on student attainment, attendance, satisfaction, and drop-out rates. Student evaluation surveys constitute one of the key inputs to the system and are conducted in all courses. These are conducted anonymously online at the end of each semester. The results are analysed by course, semester, and member of staff. There is close communication between faculty, students and administration, which provides another channel of mutual communication. The students met by the EEAP emphasised their positive experience with faculty and administration in this regard. The EEAP noted that thesocial partners interviews, who also have sent their staff to the PSP, remarked on both faculty and administration's positive availability and keenness to listen to their views and share thoughts on PSP course content. This provides an additional channel of communication and capturing information. It is currently captured systematically, but it could be further integrated into the information management system.

#### III. Conclusions

The EEAP finds that the information management is appropriate and in full compliance with Principle 7.

#### **Panel Judgement**

*Please tick one of the following:* 

Principle 7: Information management	
Fully compliant	X
Substantially compliant	

Partially compliant	
Non-compliant	

# Panel Recommendations

Please provide your recommendations with regard to issues that need to be addressed, as appropriate.

# No recommendations.

**PRINCIPLE 8: Public Information Concerning The Postgraduate Study Programmes** 

INSTITUTIONS SHOULD PUBLISH INFORMATION ABOUT THEIR TEACHING AND ACADEMIC ACTIVITIES RELATED TO THE POSTGRADUATE STUDY PROGRAMMES IN A DIRECT AND READILY ACCESSIBLE WAY. THE RELEVANT INFORMATION SHOULD BE UP-TO-DATE, OBJECTIVE AND CLEAR.

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

Therefore, Institutions and their academic units must provide information about their activities, including the PSP they offer, the intended learning outcomes, the degrees awarded, the teaching, learning and assessment procedures applied, the pass rates, and the learning opportunities available to their students. Information is also provided on the employment perspectives of PSP graduates.

#### Documentation

- Dedicated segment on the website of the department for the promotion of the PSP
- Bilingual version of the PSP website with complete, clear and objective information
- Provision for website maintenance and updating

#### **Study Programme Compliance**

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. <u>Findings, analysis of judgement</u> and <u>conclusions</u> should be developed below in <u>three distinct parts</u>.

#### I. Findings

The EEAP confirms that the department has developed a comprehensive and accessible website for its PSP in Applied Statistics programme. The website provides detailed information in both Greek and English about the programme's structure, curriculum, faculty, student services, and quality assurance policies. It is regularly updated to ensure that all information is current, clear, and easily accessible to prospective and current students.

The PSP in Applied Statistics has a strong presence at various Open Days and Career Days, where prospective students can gain detailed information about the programme. During these events, attendees can meet faculty members and current students, ask questions, and comprehensively understand the programme's content and career prospects. Participation in these events and the information provided through the official website enhance the programme's transparency and accessibility for prospective students.

The PSP in Applied Statistics maintains a strong presence through the department's social media accounts. These platforms share updates, news, and information about the programme, upcoming events, and achievements. The vibrant social media presence helps to engage with prospective and current students, alumni, and the broader community.

#### II. Analysis

The Department's website is well-designed and structured, making it easy for visitors to find the information they need. The clear segmentation of information into different sections enhances user experience and ensures visitors can quickly navigate the relevant content. The website provides a thorough overview of the postgraduate programmes, including detailed descriptions of the courses and assessment procedures. This transparency helps prospective students understand what to expect from the programme and make informed decisions. Additionally, the presence of detailed information about the faculty members and their research interests adds value by showcasing the expertise available within the Department.

Also available is the program of studies, the current year's study guide, which is downloadable, information on registration for the course with a link to the electronic registration webpage, a brief description of the assistance offered by academic advisors, and a form that can be filled in and submitted.

The presentation of strategic synergies highlights the Department's efforts to integrate with the broader community and industry. The Department's strong presence on social media platforms further enhances its reach and engagement with students and the broader community.

#### III. Conclusions

The EEAP finds that the information management is appropriate and in full compliance with Principle 8.

#### **Panel Judgement**

*Please tick one of the following:* 

Principle 8: Public information concerning the postgraduate study programmes	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

#### Panel Recommendations

Please provide your recommendations with regard to issues that need to be addressed, as appropriate.

R8.1 – Establish a dedicated section for alumni on the website.

PRINCIPLE 9: ON-GOING MONITORING AND PERIODIC INTERNAL EVALUATION OF POSTGRADUATE STUDY PROGRAMMES

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

The regular monitoring, review, and revision of postgraduate study programmes aim at maintaining the level of educational provision and creating a supportive and effective learning environment for students.

The above comprise the evaluation of:

- a) the content of the programme in the light of the latest research in the given discipline, thus ensuring that the PSP is up to date
- b) the changing needs of society
- c) the students' workload, progression and completion of the postgraduate studies
- d) the effectiveness of the procedures for the assessment of students
- e) the students' expectations, needs and satisfaction in relation to the programme

*f)* the learning environment, support services, and their fitness for purpose for the PSP in question Postgraduate study 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.

#### Documentation

- Procedure for the re-evaluation, redefinition and updating of the PSP curriculum
- Procedure for mitigating weaknesses and upgrading the structure of the PSP and the learning process
- Feedback processes concerning the strategy and quality goal setting of the PSP and relevant decision-making processes (students, external stakeholders)
- Results of the annual internal evaluation of the PSP by the Quality Assurance Unit (QAU), and the relevant minutes

#### **Study Programme Compliance**

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. <u>Findings</u>, <u>analysis of judgement</u> and <u>conclusions</u> should be developed below in <u>three distinct parts</u>.

I. Findings

The PSP self-assessment procedure takes place annually with the support of the external advisory board and the QAU. The findings of the PSP self-assessment are shared within the academic unit. The PSP is assessed using students' and graduates' evaluations. The EAAP found no information on surveys from external stakeholders

#### II. Analysis

The PSP collects data, which it uses to improve. The students' and graduates' evaluation surveys serve as an indirect assessment method for the PSP. Students,

graduates, and other stakeholders do not appear to have been directly involved in the decision-making processes for curriculum improvements. The number of students participating in the course evaluations is around 50%. The student survey results showed that the PSP students are very satisfied with the PSP course objectives and the material covered.

#### III. Conclusions

The PSP is assessed predominantly through student surveys and the external advisory board. No evidence of the engagement of students, graduates, and external stakeholders in its improvements.

#### **Panel Judgement**

Please tick one of the following:

Principle 9: On-going monitoring and periodic internal evaluation of postgraduate study programmes	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

#### **Panel Recommendations**

Please provide your recommendations with regard to issues that need to be addressed, as appropriate.

R9.1 – Develop means for capturing the "voice of the customer" (stakeholder views on the programme and its content) and use it for continuously improving the programme

#### **PRINCIPLE 10: REGULAR EXTERNAL EVALUATION OF POSTGRADUATE STUDY PROGRAMMES**

# THE POSTGRADUATE STUDY PROGRAMMES SHOULD REGULARLY UNDERGO EVALUATION BY PANELS 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 PSP accreditation process which is realised as an external evaluation procedure, and implemented by panels of independent experts. HAHE grants accreditation of programmes, based on the Reports delivered by the panels of external experts, with a specific term of validity, following to which, revision is required. The quality accreditation of the PSP acts as a means for the determination of the degree of compliance of the programme to the Standards, and as a catalyst for improvement, while opening new perspectives towards the international standing of the awarded degrees. Both academic units and Institutions must consistently consider the conclusions and the recommendations submitted by the panels of experts for the continuous improvement of the programme.

#### Documentation

 Progress report of the PSP in question, on the results from the utilisation of possible recommendations included in the External Evaluation Report of the Institution, and in the IQAS Accreditation Report, with relation to the postgraduate study programmes

#### **Study Programme Compliance**

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. <u>Findings</u>, <u>analysis of judgement</u> and <u>conclusions</u> should be developed below in <u>three distinct parts</u>.

#### I. Findings

This is the first external evaluation and accreditation of the PSP in Applied Statistics, and as such, no prior recommendations are available. However, the programme is continuously evaluated via the advisory board, the students' feedback, and discussions with external stakeholders, which leads to improvements. Additionally, the department has established a comprehensive process for reviewing the findings and recommendations from future external evaluations, as outlined in the provided documentation.

The findings from the evaluation highlighted several strengths of the programme, including its comprehensive and up-to-date curriculum, the high qualifications and active research involvement of the faculty, and the positive feedback from students regarding the quality of education and support services. The EEAP also identified areas for improvement, such as enhancing the programme's international collaborations and facilitating faculty training in innovative teaching methods.

#### II. Analysis

The strengths identified in this evaluation, such as the robust curriculum and the faculty's expertise, underscore the programme's commitment to providing highquality education. The positive feedback from students highlights the programme's success in delivering a supportive and enriching academic experience. However, the identified areas for improvement indicate opportunities for further development, particularly in enhancing international collaborations and adopting innovative teaching practices.

The collaboration between the Department of Statistics and the Hellenic Statistical Authority (ELSTAT) can be considered an informal evaluation of the programme. Specifically, this partnership has enabled the provision of the European Master in Official Statistics (EMOS) certification. This certification, achieved through the programme's examination and approval, highlights the curriculum's quality and relevance. Students who obtain the EMOS certification are qualified to work in all national statistical offices across Europe, enhancing their career prospects and promoting statistical excellence at an international level.

# III. Conclusions

The EEAP finds that the information management is appropriate and in full compliance with Principle 10.

# **Panel Judgement**

Please tick one of the following:

Principle 10: Regular external evaluation of postgraduate study programmes	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

# **Panel Recommendations**

*Please provide your recommendations with regard to issues that need to be addressed, as appropriate.* 

R10.1 – The department should conduct thorough annual internal reviews facilitating the transfer of the outcomes to the PSP.

# PART C: CONCLUSIONS

# I. Features of Good Practice

*Please state aspects of good practice identified, with regard to the postgraduate study programme.* 

A well-balanced programme focusing on

the applied statistics without downplaying the theory,

External certification (EMOS) available for the students,
All the members of staff are dedicated to the mission of the department and the success of the PSP,
Infrastructure and facilities are in good condition, well-maintained and exceeding expectations,
The department has very good relations with the stakeholders,
A clear set of regulations, processes and procedures are documented in the departmental documents,
Established external advisors board,
High profile graduates

#### II. Areas of Weakness

*Please state weak areas identified, with regard to the postgraduate study programme.* 

• Lack of research ethics code of practice in the documentation and specifically in the context of masters thesis,

• Participation of students in feedback surveys is relatively low (ca. 50%),

• The alumni community is not established and organised.

#### III. Recommendations for Follow-up Actions

Please make any specific recommendations for development.

EEAP recommends that the PSP management team should:

• continue revisiting the PSP goals and intended learning outcomes to keep the programme relevant,

• consider establishing a feedback mechanism involving alumni and stakeholders for the continuous improvement of the PSP,

 $\cdot$  establish the mechanisms as for students to be allowed to enrol in elective courses from other PSPs programmes within the AUEB,

- · Initiate an internship program for unemployed students,
- Establish and communicate a code of practice associated with research ethics,

 $\cdot$  communicate the newly established complaint system to the wider body of the students,

• encourage stakeholders to offer scholarships to the students,

- strengthen the ongoing collaborations with organisations,
- establish a dedicated section for alumni on the website,
- facilitate the dissemination of good teaching practices across the programme, the department and the wider university.

#### IV. Summary & Overall Assessment

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The Principles where full compliance has been achieved are: Principes 1-3, and 5-10

The Principles where substantial compliance has been achieved are: Principle 4

The Principles where partial compliance has been achieved are:

The Principles where failure of compliance was identified are:

Overall JudgementFully compliantXSubstantially compliantPartially compliantNon-compliant

# The members of the External Evaluation & Accreditation Panel

Name and Surname

SALONITIS KONSTANTINOS

ANGELIS JANNIS

NIKOLERIS GIORGOS

STYLIANOPOULOS NIKOS

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