



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

Α Δ Ι Π

ΑΡΧΗ ΔΙΑΣΦΑΛΙΣΗΣ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΗΣ
ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΣΤΗΝ ΑΝΩΤΑΤΗ ΕΚΠΑΙΔΕΥΣΗ

HELLENIC REPUBLIC

HQA

HELLENIC QUALITY ASSURANCE
AND ACCREDITATION AGENCY

Accreditation Report for the Undergraduate Study Programme of:

Statistics

Institution: Athens University of Economics and Business

Date: 16/11/2019

ΑΡΙΣΤΕΙΔΟΥ 1 & ΕΥΡΙΠΙΔΟΥ, 105 59 ΑΘΗΝΑ
Τηλ.: +30 210 9220944, FAX: +30 210 9220143
Ηλ. Ταχ.: adipsecretariat@hqa.gr Ιστότοπος: <http://www.hqa.gr>

1, ARISTIDOU ST., 105 59 ATHENS, GREECE
Tel.: +30 210 9220944, Fax: +30 210 9220143
Email: adipsecretariat@hqa.gr Website: www.hqa.gr



Ευρωπαϊκή Ένωση
Ευρωπαϊκό Κοινωνικό Ταμείο

Επιχειρησιακό Πρόγραμμα
Ανάπτυξη Ανθρώπινου Δυναμικού,
Εκπαίδευση και Διά Βίου Μάθηση
Με τη συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης



EUROPEAN ASSOCIATION
FOR QUALITY ASSURANCE
IN HIGHER EDUCATION

Report of the Panel appointed by the HQA to undertake the review of the Undergraduate Study Programme of **Statistics** of the **Athens University of Economics & Business (AUEB)** for the purposes of granting accreditation

TABLE OF CONTENTS

PART A: BACKGROUND AND CONTEXT OF THE REVIEW	4
I. The Accreditation Panel	4
II. Review Procedure and Documentation	5
III. Study Programme Profile	10
Part B: Compliance with the Principles.....	11
Principle 1: Academic Unit Policy for Quality Assurance.....	11
Principle 2: Design and Approval of Programs	13
Principle 3: Student- centered Learning, Teaching and Assessment.....	16
Principle 4: Student Admission, Progression, Recognition and Certification	18
Principle 5: Teaching Staff	20
Principle 6: Learning Resources and Student Support	23
Principle 7: Information Management	26
Principle 8: Public Information	28
Principle 9: On-going Monitoring and Periodic Internal Review of Programmes	30
Principle 9: On-going Monitoring and Periodic Internal Review of Programmes	31
Principle 10: Regular External Evaluation of Undergraduate Programmes.....	33
Principle 10: Regular External Evaluation of Undergraduate Programmes.....	34
Part C: Conclusions	35
I. Features of Good Practice	35
II. Areas of Weakness	35
III. Recommendations for Follow-up Actions.....	35
IV. Summary & Overall Assessment	36

PART A: BACKGROUND AND CONTEXT OF THE REVIEW

The Accreditation Panel

The Accreditation Panel (AP) that it is responsible for the Review of the Undergraduate Programme of **Statistics** of the **Athens University of Economics and Business (AUEB)** comprised the following four members, drawn from HQA Register, in accordance with the Law 4009/2011:

- 1. Prof. Stergios Fotopoulos (Chair)**
Washington State University, United States of America

- 2. Prof. Emeritus Spyros Economides**
California State University, United States of America

- 3. Assist. Professor Michael Talias**
Open University of Cyprus, Cyprus

- 4. Dr Vitantzakis B. Nikolaos**
Member of Economic Chamber of Greece, Greece

Review Procedure and Documentation

The Accreditation Panel (AP) visited the premises of the Athens University of Economics and Business (AUEB) on November 11 & 12, 2019 and conducted a series of meetings as part of the Accreditation review process of the undergraduate study programme of Statistics.

The AP was greeted by the university Deputy Rector for Academic Affairs Professor Dimitris Bourantonis and the Department of Statistics Chair Professor Vassilios Vasdekis. Both Professors Bourantonis and Vasdekis with members of the Department of Statistics held the first meeting at the Department's conference room where they provided the accreditation material to the AP to be examined.

The Deputy Rector of Academic Affairs and the Department Chair together opened the discussion by first overviewing the Department's history, its development the profile, and relevant information, which can be also found on the Department's website. The Chair continued providing information regarding the mission and vision of the Department, its organization, such as academic staff, administrative staff, lab staff, enrolment, as well as graduate Programmes. He provided information regarding the strongest and lowest points of the Department. Specifically for the strongest points, he provided information with respect to teaching approaches, and emphasized the effectiveness of the learning approaches such as internships, involvement to projects, and integration with the Erasmus Programme. Regarding the lowest points, he talked about operation, such as the large number of incoming students imposed by the Ministry of Education, lack of autonomy regarding budgetary issues, and lack of hiring new faculty.

The Departmental Management, within the context of the accreditation process of the Department's Undergraduate Curriculum, has provided the AP with the following explanatory information:

1. A power point presentation by the President of the Department of Statistics by Prof Vassilios Vasdekis, which contains brief information on:
 - ✓ the organizational structure of the faculties of AUEB and of the Department of Statistics according to the organizational chart of the AUEB and the statistics of the Department,
 - ✓ the main objectives, the curriculum strategy and structure, the programme revision process and the learning outcomes,
 - ✓ the educational process, student enrolment and attendance levels, Erasmus curriculum, student internships and entry bases for 2018 and 2019
 - ✓ the level of faculty members and the number of their posts by category of WoS journals,
 - ✓ the extroversion of the Department and the various activities of the Department,
 - ✓ the periodical internal and external assessment and the graduate research of the period 2012 – 2018.
2. The study guide for the undergraduate programme for the academic year 2019-2020.
3. The Research for the graduates of AUEB for the period 2012-2018.

4. The proposal of MODIP of AUEB for the accreditation of the undergraduate programme of the Statistics program.
5. The advertising document of AUEB with title «Extraversion, Excellence, Social Offering, Innovation».

Meeting with the Deputy Rector/President of MODIP Dimitrios Bourantonis, Professor, Deputy Rector of Academic Affairs / President of MODIP **& the Head of the Department,** Vasilios Vasdekis, Professor, Head of the Department of Statistics

The Vice-Rector and the Chair of the Department referred to their difficult operating conditions, ★ which also exist in other Universities, as well as to the international recognition of the AUEB, which has 3 facilities, with a total of 8 Departments. The Department believes that based on the economic difficulties Greek Universities are facing, the hiring is limited and there is a pressure to increase the number of students in the University year by year. The Department of Statistics is "doing well", confirming that 74% of its graduates of the Department are engaged by the industry before even obtaining the degree.

★It is noted that the Senate of the University decided, on Sunday 10/11/2019, to suspend the operations at the AUEB until November 17, 2019 in order to avoid any riots or vandalisms at the University buildings. By imposing the Senate's policies, the University has called the police to provide various safety guarantees that the students are harmless. The above actions were a result of a police intervention to confront anarchists violated the University premises in earlier incident.

The Department Chair of Statistics met with AP on Monday and presented in detail the Department's activities including its Curriculum. All details of the presentation are provided in Section II, Study Programme Profile.

The Department has set up an «Extraversion Committee» to investigate what the market, companies want. To do so, institutes and organizations were approached by the Department and various informal discussions have initiated to seek key areas of collaboration.

Meeting with OMEA & MODIP

At the meeting of the AP with ModiP and OMEA executives, the Vice-Rector, 4 professors and 2 members of the ModiP and OMEA executives participated. The following were highlighted in the meeting:

- There is no responsible body to collect the official records from the market and the needs of the market.
- The Statistical department has an effective communication with academic departments within the AUEB and several departments from other Universities through seminars, research presentations and meetings to discuss their curriculum.
- The departmental students of the 4th year are permitted to study 7 modules from other departments within the AUEB.

- There are no connections with other statistical departments as far as the specialization of the statistical department is concerned.
- The Postgraduate degree consists of 4 courses from the Department of Statistics and 4 courses from the Department of Informatics. In these programs, students participate on a part time or a full-time basis. Students are mathematicians, engineers, medical doctors, economists, or military members.
- Internship is optional and lasts 3 months. Key factors that students do not pursue Internship are that there are no market placements, no ESPA funding, and no educated staff.
- Through students' progress, they are asked to solve problems using statistical packages.
- The Professors' view of the Department is substantially good. They all work well together, and the environment appears to be healthy.
- Professors have on average a satisfactory number of Publications
- The Department follows the AUB Quality Policy, but it would be particularly useful for the department to have a more specialized policy tailored to its specific needs and orientations.

It is noted that the AUEB has obtained the EFQM distinction through the Hellenic Management Association. It was reported that MODIP executives are collaborating with scientists and executives using not systematic process. MODIP also cooperated with 5 other Universities in order to design the Internal Quality System.

Meeting with teaching staff members

The meeting of the Panel was attended by 8 professors.

Questions have been asked by the AP about the work of executives in the Department, how they see the future, the existence or not of research funds, the sources of raising funds, the incentives available, etc.

It is found that due to the heavy involvement of faculty members with administrative tasks, there is limited time for faculty members to produce research. Although there is a good organization in the AUEB, in terms of teaching, research and administrative duties, the problem seems to be related to extracurricular activities such as there is no funding to subsidize dissertation students.

The promotion of professors lasts 3 years on average. However due to bureaucratic processes, it can even last 5 years. There are incentives to participate in conferences and programs. Seminars are also funded through the Postgraduate Program. Faculty members remain steady in number or even decreasing, even though that every year 130-140 new students enter the Department. Doctoral candidates teach and correct assignments for the undergraduate program.

The Department has 30 PhD students. The lack of funding for PhD candidates is a reason for not having more PhD students. Of those completing their doctorate, approximately 85% pursue an academic career while 15% go to companies. It is noted that 50% from the Ph.D. student population are coming from other institutions, such as natural sciences or Business Universities.

Because of the last month's episodes in AUEB, some of the lectures at the University were suspended. The reason for that was that troublemakers interfered in academic procedures by occupying lecture rooms or disrupting the classes. These disturbances have been occurred even beyond the last two months. The claim is that they go as back as more than two years. It is believed that the University campus becomes pretty chaotic and people from outside the University are doing unlawful business. In view of this, the central administration and faculty members are requested a help from the Ministry of Education to provide some more permanent solutions to abolish the University asylum (as it has happened). The police involvement eliminated these interruptions. Despite the aforementioned problems, faculty members say that they feel satisfied of working for AUEB.

Meeting with Students

The meeting with the AP was attended by 10 students, 3 from the 3rd year, six from the 5th year and one from the 6th year.

From relevant questions, the students were asked if the Department of Statistics was their first choice. Their reply was that it wasn't. But as time went by, they felt that the Programme was well suited to their needs and realized that statistics is not only a useful tool for their carriers, but also a carrier opportunity. However, because of the heavy demand in learning during the first year (too many mathematical courses and not so much relevance to what they expected), many students gave up this major. Most senior students admitted, however, that in the 2nd and 3rd year (more relevant classes) they started to love the Department, the courses and the School.

Students also stated that not all professors have good knowledge of the subject matter and their ability to communicate is not satisfactory. There was also some agreement among the students that some teaching assistants (TA) do not have enough knowledge to conduct lectures or even help students.

Because of lack of internships, not all students have the opportunity to participate in such ventures. Further, since the University training and the Industrial needs are not compatible (no formal advising committee between industry and University), the claim is that most students are assigned within the organizations in irrelevant posts. For this reason, it would be appropriate to coexist a better communication between industry and University knowledge. Students prefer to do internships during the final year of their studies. Consequently, this may lead to possible employment to these companies.

It is a fact that the level of the academic staff at the Department of Statistics is of high level. Students do appreciate how their faculty present/explain difficult concepts of statistical analysis in a way to implement these in practical cases.

The Department apart from standard classroom set up, also provides a student-learning centre. Academic and Administrative staff are available to all students and extremely helpful to their needs. Further, the existence of student organizations and study groups adds value to increase knowledge and experience in their field.

Since scholarships are not offered by the Universities, the majority of the graduates prefer to study overseas. Clearly, the statistic area is not as spread as other areas such as economics, finance mathematics, etc., the opportunities of employment are not as high as one would have expected. However, this is not the case to countries like US, and many countries of the European Union. For this reason, many statisticians would search for employment overseas. To avoid such situations, the Department needs to develop a better communication with industry, Institutes and Government organizations to facilitate better solutions for the field.

Visiting classrooms, lecture halls, libraries, other facilities

Because of the disruptions and the police intervention at the main building in AUEB, the AP was unable to visit the main building and instead they visited the Troy Street building.

Meeting with graduates

The AP also met with 11 graduates of the Department who are either employees or postgraduate students.

Graduates pointed out that even though there is an alumni association, it needs to be improved and the labor market links need to be strengthened with the Department. They want to get in touch with the graduates of the Department who are already working and ask guidance from them. Graduates believe that their knowledge of statistics, mathematics and information systems gives them an advantage compared to the graduates from other disciplines

The student's recommendation was that a certification should be granted to all students that possess knowledge of programming languages taught at the University.

Today, if they had participated in Pan-Hellenic entrance exams, they would have consciously chosen the Department of Statistics as their first choice.

They find that e-secretarial and labs work very well and some of the professors use social media and upload tasks, articles, invitations, material, etc.

They believe that the university should be as close as possible to new technologies and suggest that the placement of tutors or advisors should not be randomly assigned. In one case there was a complaint that a tutor never met any student.

Meeting with employers, social partners

Members of companies, institutes, organizations and authorities participated in the meeting with the AP: the members were from the Greek Statistical Institute, Hellenic Statistical Authority, QUANTOS, NIELSEN, SAS, Actuarial Association of Greece, IRI, Bank of Greece, ICAP and Frontier Science Foundation.

The expectations of the companies are restricted to just small amount of the subjects offered in the Department. Of course, this depends upon the company's needs. For instance, some of the companies require them to know how to collect data, how to visualize them and how to implement various statistical methodologies for deriving decisions. Knowledge of how to model

data, using regression analysis, time series, forecasting, cluster analysis etc., are essential to their growth. The students consider that the Programme provides an education that balances both theory and practice, which is sufficient to cope with any situation in the market place.

The Hellenic Statistical Institute calls for more active participation among Department of Statistics, Institutes, Research Centres, Companies and Government Organizations.

Study Programme Profile

The Department of Statistics was established in 1989 and students were admitted for the first time in the academic year 1990-1991. In the School of Information Science and Technology there are two Departments, the Department of Informatics and the Department of Statistics. The Department of Statistics is the only pure Statistics Department existing in the country. It has 21 faculty members, 1082 undergraduate students, 42 Ph.D. students and 69 Master students attending the year 2019-2020. The students graduated up to present have reached 1599. The supportive administrative staff is consisted of 7 people, 4 administrative officers, and 3 lab specialists.

The Departmental labs available are:

- ✓ Computational and Bayesian Statistics Lab,
- ✓ Stochastic Modelling and applications Lab, and
- ✓ Statistical Methodology Lab

Some facts related to the studies:

- ✓ The average duration of study is 5.4 years. For the year 2017-2018 the average grade of the graduates was 6.8, while the overall average for the entire period of the 30 years is 6.7.
- ✓ About 40-50% of students are lasting longer in completing their studies. This is a result of the economic situation in Greece.
- ✓ The average number of students per class is 43.
- ✓ Among the Departments in AUEB, the Department of Statistics was the second most popular Department for the year 2017-2018. This is an improvement for what it was the year 2016-2017, when it was 7.2 in preference.
- ✓ From the undergraduate students enrolled till the academic year 2017-2018, 45% of them are within the four year schedule, 17% of them are in the 5th or 6th year and 38% are above the 6th year.
- ✓ Over the years, over 60 graduate students of the Department of Statistics have continued their studies and obtained Ph.D. either from a foreign or a domestic University.
- ✓ The minimum grade to enter in the Department of Statistics was 13,354 points for the year 2018 and 13,337 points for 2019.
- ✓ From the 1997-98 academic year up to the 2018-19 academic year, the Department is part of the Erasmus Program. Through this Program, the Department has admitted 58 students from European countries. On the other hand, the students left the Department, under the same Program, to European countries are 110.

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 organization 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

Based on series of meetings with the Chair of the Department of Statistics and members of the Department and on documents handled by the Department, the AP established the following:

The organization of the curriculum went through under many revisions. The Department followed all the regulations and all procedures according to the specifications of the Quality Assurance System, which is applied by MODIP in the AUEB.

It has been observed by the AP that the Department was completely devoted to the process and all efforts were concentrated to follow the ongoing Quality Assurance System and to guarantee that a continuous improvement occurs.

Regular periodic revisions have been carried out by the Department to show that academic quality is maintained. The Department examined directions and used contemporary ways to improve teaching that routinely were advised by reputable educational institutes in Europe to keep the Department up-to-date. It constantly met to self-examine how to improve learning, increase effectiveness and adapt procedures to improve both academic and administrative staff. It also searched for ways to connect teaching with research. Also, its goal was to identify strategies how to engage the market place with its graduates.

A set of specific relevant objectives and measurable indicators were implemented with satisfactory results in the Department for the curriculum. Many goals are set by the Department. They were monitored, measured and updated. At the same time, the Department kept in communication with all stakeholders to check their intentions and discuss how to improve the relationship between students and companies. All the objectives have been discussed and approved by the Senate of the AUEB, which demonstrates the commitment to Quality, the Foundation's senior management and the relevance of its implementation process to the individual Departments of the University.

Among the highlights of Department are a) the 2012-2018 student satisfaction survey showed encouraging and extremely positive results, and b) the 'Committed to Excellence' award was earned by EFQM in September 2016 through the Hellenic Management Association.

Panel judgement

Principle 1: Institution Policy for Quality Assurance	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

The AP recommends that further training of MODIP and OMEA executives is needed in the areas of Total Quality, Quality Control, Quality Assurance, and particularly to the EFQM Model, ISO 14000, Principles ELOT Guide lines for Higher Education, etc. This means that a broader training is suggested to be available on Quality issues than this required by the OSIA Quality Assurance System.

Principle 2: Design and Approval of Programs

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 AUEB Department of Statistics was established in 1989. Its mission is to educate students in the areas of statistics and probability and to provide both national and global statistical opportunities for learning. The Department focuses on engaging students in activities beyond just the course work and expose them to the impact of applied probability and statistics employed in the national and international arena. The task assigned to the Accreditation Panel (AP) is to assess the quality of the Department's academic offerings.

The goal of the Department of Statistics is to provide a high-quality education leading to enhanced employment opportunities for the graduates of the program. In order to achieve this, the department promotes the area by providing both theoretical and applied knowledge through teaching, research, reading published articles and participating in internships. Also, the Department strives to prepare and recruit from their undergraduates any potential Master Degree or Ph.D. candidates to join their graduate degree programs and to become leaders in their respective field.

The Programme of Study is designed to consolidate the intending learning objectives and the faculty believe that this is accomplished.

Internships are optional in the program. However, faculty strongly encourage students to take advantage of such opportunities.

There are two kinds of Internships for undergraduate students:

- 1) Through partnerships with organizations that the Department has established within Greece.
- 2) The Erasmus Program: these internships are partially funded by ESPA and are offered throughout Europe.

In both cases, internships typically last about three months and students receive up to six credit hours along with some monetary assistance for living expenses, as appropriate.

Students are encouraged to broaden and diversify their knowledge through appropriate elective course selections that are offered by other departments, such as economics, management, marketing, etc.

The Department faculty appears to have an excellent relationship with the local business community which results in a mutually beneficial relationship. On the one hand, the students have an invaluable opportunity to apply what they have learned to real-world situations. It can also provide the students with a realistic vision of what to expect when looking for a job. On the other hand, stakeholders are in a position to provide the Department with feedback on the preparedness of the students to tackle the issues presented to them. The Department can take this feedback into consideration when preparing their curriculum or enhance other areas that were considered valuable, as appropriate.

The Undergraduate Programme of study consists of 14 core courses that all students are required to complete. There are also two groups of elective courses that must be taken either from the offerings in the department or other departments within the AUEB. In the first two semesters the courses offered are only core courses. The remaining semesters consist of a combination of core and elective courses. This is a logical and flexible progression for the students.

The Department practices the linkage between research and teaching. For instance, undergraduates are encouraged to read articles relevant to statistics to expand their knowledge in the field. The Programme offers elective courses which integrate statistical knowledge and methodology into other fields, including biology, psychology, medicine, engineering etc. These courses may be described as biostatistics, quantitative psychology, medical statistics and so on. This demonstrates the wide applicability of statistics in other fields.

Panel judgement

Principle 2: Design and Approval of Programme	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

It is suggested by AP that the Department creates a formal Advisory Board composed of external stakeholders, faculty, alumni and students. The purpose of the Board would be to assist and guide the Department on an ongoing basis to maintain a relevant curriculum for the stakeholders. It would ensure that the department is offering a curriculum that puts their students in good standing in the competitive world of employments. It could also broaden the Department's outreach to the community at large.

The department should establish a committee of faculty members, graduate students and stakeholders to investigate market trends for the needs of companies, research centres, Government organizations, etc. An additional role of the committee is to meet regularly and propose thoughts of how the curriculum can be enriched and be up-to-date.

A mechanism of connecting the Department and the market place is essential for providing job opportunities to the graduates. To this direction, a committee suggested earlier should play a significant role to investigate the needs of the market place, companies, institutes and organizations in order to create carrier opportunities for the students.

Based on the documentations provided to AP, it appears that there is no strong alumni association. It is recommended by the AP to create such an association consisting of graduate students that organizes events, publishes a magazine and raises funds and support new alumni.

Principle 3: Student- centered 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-centered 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 AP observed that there is a congenial, close relationship between students and staff. Based on one of the recommendations of the External Evaluation Committee review, there has been a genuine effort from the faculty to diversify their teaching approach which contributes to a better quality of teaching. Faculty utilize various teaching approaches which incorporate up-to-

date technology, case studies, laboratory exercises, invited speakers, student presentations, just to name a few. The use of e-class platforms adds value to the student-centered learning process.

To increase teaching effectiveness and best learning practices, student evaluations are regularly reviewed by the chairperson or an advisory committee set by the programme or even by a mentor committee consisting of experienced faculty to advise young faculty. These committees meet regularly (usually gathered by the end of each semester) to provide feedback to faculty on how to increase efficacy, student-instructor interaction, team work, participation, acceptance, reputation etc.

Students are assigned a faculty advisor who counsels mainly on programme of study issues as well as any other concerns that students may have, such as, feedback related to practical training Erasmus participation and others.

A formal procedure dealing with student complaints and appeals is in place. It is well documented and available on the website.

Based on the proposal for accreditation, the student is evaluated on written examination papers, and/or an oral examination as well as through the assignments the professor assigns throughout the semester. As for people with special needs, the unit treats them with care and respect and, depending on the cases, provides alternative forms of examinations. This methodology is also supported by almost all reputable universities worldwide.

Panel judgement

Principle 3: Student- centered Learning, Teaching and Assessment	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

In summary, the AP's perception of the Department is excellent. The Programme of Study adopts a student-centered procedure that promotes mutual respect and good practices that boosts learning.

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

In terms of students' progress and rewards in the Department of Statistics, the AUEB provides a booklet to all new students. The booklet contains guides and policies that each student requires to apply in order to resolve immediate and future questions while attending the school. It also contains data of how a student receives information related to the courses of each semester, how to get books for their corresponding courses, how to get an email account, how to have access to the computers, how to obtain information for receiving tutoring, how to assist in social events, etc.

At the first week of each Academic year, the AUEB formally addresses all new students. Also, the administrative welcomes the students to the Department where each student receives an envelope containing useful material for their enrollment and valuable data concerning the academic staff, schedules, etc.

As the semester develops, each faculty pays close attention to the growth of the student attending his/her class. In addition, the electronic system provides statistics of the individual's progress for each semester as well as of the whole population. A face-to-face advisor can be also a facilitator in the student's progress. An advisor task is to advise students how to improve their grades, to help them choose the right courses, and generally to guide them to their success.

The Department with the collaboration with the AUEB informs all students of the available graduate programs in the Department. At the same time, notifies good students of the available scholarships provided by AUEB. A student with a low income may also apply for scholarships through the National Institute of Scholarships (NIOs) in order to extend his/her education to a Graduate Program. The NIOs also inspires excellent students to apply for obtaining monetary

support for studying abroad. The NIOS also supports all students succeeding to receive a scholarship for expenses and become proficient in the language of the country they intend to study. The scholarships are adjusted to the cost of living of the intended country. For those students who wish to study in the same Department, the Department of Statistics provides a full scholarship to all students with GPA at least 8.5. The form of the scholarship is designed such that a student does not need to complete his/her fourth year of their study but instead must attend the graduate Programme offered by the Department that lasts three additional years.

Each academic year, the AUEB notifies all Departments for the Erasmus Program, where students can participate in various projects abroad.

Each student is eligible to transfer credit hours from one Department to another.

Each graduate student receives a diploma by the end of his/her graduation according to the law “ΦΕΚ1091/10.08.2006/τ”. The diploma contains information about the person, the title, the level, the lasting of his/her studies, the grades, the credit hours, the courses he/she attended, etc.

During the period of studies, each student in the Department of Statistics is eligible to do a final project (thesis) that covers a large spectrum of knowledge including theory, simulation and application (a guideline of how the project will be structured is available). For a student who does the project, he/she must first complete successfully all the courses.

The reason for the thesis is that the student will be able to excel in the field he/she studied, to be able to illustrate how a case study can be successfully approached and to be able to provide guides to an audience of what methodology can be applied given a set of data and how decisions can be made.

Panel judgement

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

Panel Recommendations

It is believed by the AP that the Department closely follows all the guidelines set by the European Community and the guides set by the top Universities in United State.

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 recognize 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.*

The academic staff in the Department of Statistics Programme consists of 22 faculty (10 Full Professors, 8 Associate Professors and 4 Assistant Professors). The Academic staff's duties involve teaching, conducting research and service to the Department and University. In addition to the academic staff, there is lab personnel consisting of two members and administrative staff consisting of five people, three of which support the undergraduate Programme and two the graduate Program.

To recruit or promote faculty, the Department follows standard rules and regulations that all candidates are required to fulfill. Specifically, the process of recruiting, promoting and ensuring a permanent position at the Department of Statistics in AUEB follows the Law v.4009/2011 as well as the constitution defined by the Department which is publicized in [ΦΕΚ 827/15.03.2017/τ.Β'](#). These laws are overseen by the Ministry of Education.

The Department of Statistics advertises all academic positions via the electronic system Apella. If a candidate is eligible he/she may apply through this system. The process is simple, transparent and easy to follow. The candidates receive constant feedback and can access their application status through all stages of his/her application.

Regarding the evaluation of a candidate, a committee of the academic staff is well-defined. The committee is responsible to set the guidelines of how to proceed in the evaluation. These rules are tailored according to the teaching/research experience of each candidate.

For the last two years, the teaching duties of the academic staff in the Department of Statistics has averaged 11 hours, plus or minus four hours, on a weekly basis. The academic staff comprises both faculty and teaching assistants (TA).

At the end of each semester, a teaching evaluation is conducted for each faculty/TA member who taught the current semester. The evaluation follows a rigorous process to avoid dishonesties and duplications. As far as the evaluation of each course offered by the academic staff, the Department, with the use of student feedback, meets and decides whether the courses can be improved, possibly increase enrollment, provide awards to the best teacher, make suggestions for improving teachers with low teaching evaluation, assign a mentor system for young faculty, etc. The AP noted that there is a high level of student satisfaction; students are gratified with the quality of teaching procedures and the dedication of the teaching staff. However, it was noted by an AP member that one of the students commented that some of the TAs are not well equipped to teach the students.

To maintain high standards, the Department strongly inspires both academic and administrative staff to participate in programs of short duration for retraining by visiting national organizations, institutes, and centers. In addition, the Erasmus programme inspires members of the Department to join educational programs offered by overseas universities to learn new skills regarding teaching or researching new areas in their own field.

In the field of econometrics, AUEB ranks internationally in 48th place according to the *Journal of Econometric Theory*. To maintain such a reputation, the Department is focusing on publishing in highly rated scientific journals in statistics, econometrics, probability and stochastic processes. Looking at the official site of the AUEB, academic staff in the Department of Statistics published 24 scientific articles for the year 2019 and 48 scientific articles for the year 2018. From the AP's observations, this output has remained the same over earlier years, too. Among the journals the faculty have published in include the *Statistics for Medicine*, *Journal of Econometrics*, *Journal of Dynamics and Games*, *Scandinavian Actuarial Journal*, *Statistics and Computing*, *Biometrics*, just to name a few. This is a very impressive output.

Panel judgement

Principle 5: Teaching Staff	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

Economic issues in Greece have prevented the department from hiring of new faculty for several years. This has resulted in the existing faculty taking on a heavier teaching load than desirable. In addition, this obviously impacts the amount of time faculty can spend on research. Interim measures to alleviate this situation somewhat could be to hire temporary instructors (part-time, short-term duration), or clinical faculty, or even advertising positions for scholars to teach for a semester or two. This could provide relief to existing faculty and infusing energy and new ideas into the department and encouraging more activity and interaction.

Based on the above recommendation, some of the problems stated below can be immediately resolved. Specifically, upon the faculty testimonials, their time is pretty much occupied in teaching, advising, committees, reviewing papers and books, supervising graduate students, participating in student committees etc. Hence, there is a very little time to research and write articles as required for their promotion and maintaining the Department in a reputable level. Irrespectively of all these, the Department performs extremely well and the faculty seem to excel in the area of publications to an unexpected level. Specifically, they are ranked 48th in the world according to the Journal of Econometric Theory.

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 organized 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

For the development of the undergraduate Program, the Department of Statistics plays a tremendous role maintaining the quality in the undergraduate education, it is proactive in all academic activities and in many cases is a leader in the research growth of the Department. It has sufficient academic personnel that uses appropriately for the best outcome. It always has the support and the guide of the AUEB of how to serve well the students. To achieve all the above, the following supportive essentials are available:

1. The Department of Statistics consists of 22 faculty, 10 full professors, 8 associate professors and 4 assistant professors. Also, it has one science officer and one Lab specialist. From the Informatics Department, two teaching assistants related to the lab assistance are available year by year.
2. Regarding the daily work flow and coverage of the courses/requirements, the Department uses all necessary facilities provided by the institution, i.e., classrooms, theaters, seminar rooms, address rooms, or labs. For the development of the undergraduate education and the research development, the Department created three research centers that 57 computers are utilized to conduct research projects. In addition, a lab with 51 computers is accessible for daily use.

3. For the needs of the Department, the student association uses various offices for advising new students and guide them to succeed in the Department. The clerks in the office inform students of possible scholarships, assign a faculty advisor, and provide student ids for accessing libraries as well as information about social activities students can be involved.
4. The electronic center of the Department is “a state of art” and is available for all students in the Department.
5. The existence of a carrier office helps students to learn how to develop CVs, operational skills for obtaining jobs, suggests links of how student can take advantage for job opportunities and advertises internships offered by various organizations.
6. An office linking through National Organizations, Institutes and Scientific Centers are also available for carrier opportunities. This office provides guides and links between stakeholders, alumni and students. It helps students to create CVs, to participate in educational seminars, and to identify themes/problems that may be used for possible final projects. Finally, it provides a linkage between academic life and market place. The Department illustrates in Tables how students used such offices and statistics of their successes in the market place.
7. An office concerning operations and development is designed to identify talented students with operational skills. For such students, the office provides rigorous education for their advance. In addition, the Department as well as the office encourage and promote these graduates for an early employment, who are then directed to play a leading role in the growth of the organization.

The Department of Statistics also aids students to be associated with to the Athens Center for Entrepreneurship. It helps them to find accommodation, student restaurants, scholarships for learning foreign languages, student athletic centers, psychological centers and volunteer centers. Also, the Department provides special accommodation for students with disabilities.

As far as how the budget/needs are distributed in the Department, the AP observed the following:

- *Academic personnel.* The decision to hire a new faculty usually goes as follows. The Department identifies a need for filling a position. It is forwarded to the Rector’s office, who calls a meeting and examines the criteria for such a need. Accordingly, the AUEB, depending on the importance of the position, does the hiring or postpones it for a later time.
- *Administrative Personnel.* Also, the Rector of the University has the last word in terms of hiring administrative staff. The Rector also studies such needs of the specific unit and accordingly approves or holds the position.
- *Distribution of classrooms, seminar rooms, etc.* Regarding how the classrooms, seminar rooms, theaters, address rooms, labs, computer rooms etc. are disseminated, the Department at the beginning of each semester proposes these necessities to the Chair. Based on the available needs (sizes of the classrooms, the number of the classrooms, the number of seminars may the Department have for the specific semester, the number of conference rooms for possible addresses, etc.),

the Chair appeals to the Rector's office the Department's needs. Upon this, the request is usually granted.

Regarding the retraining of both academic and administrative staff, the Department follows the next steps:

1. *Academic Personnel*: Each faculty after certain years of service in the Department can apply for a sabbatical according to the law N.4009/2011. Also, the Department supports members of the academic staff to participate in conferences (usually a couple of them per year). These requests are usually granted by the Department Chair.
2. *Administrative Personnel*. For the retraining and improvement of the administrative staff, the Department 1) grants time for their staff to continue his/her education in graduate programs 2) allows the staff to participate in retraining seminars, 3) allows to participate in various meetings organized by AUEB, and 4) allows the member to participate in the Erasmus program.

Panel judgement

Principle 6: Learning Resources and Student Support	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

The AP strongly feels that the Department follows the model of the most prestigious universities around the world. The only suggestion The AP may offer here is the simplification of the system in terms of not always going through to the central administration. A bit of decentralization may speed the process. But again, this requires more time the system to be observed in order to see results.

It is suggested that transitional courses should be introduced in the curriculum from the first year in order the students can be connect the statistical learning and easily see what to expect in the upcoming years. In this way, students would have an earlier appreciation of the science of statistics. Therefore, the comments expressed by the interview of the AP with the students that many of them fail to continue their studies after the first year will be eliminated and may reduce the number of students quitting.

It has been suggested that in addition to programming languages taught by Department, R and SAS, it would be also useful the faculty spend a short period of time to expose students with the Microsoft Excel knowledge.

The use of electronic systems to check plagiarism is essential.

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 organization, 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 analyzing information and planning follow-up activities.

Study Programme compliance

Regarding security and storage issues of data selected, the Department has secure electronic information systems for storing data and research projects submitted by undergraduate students in the past few decades. Specifically, the following systems are stated:

- Information Systems.* 1. Systems of graduation, 2. Systems of storing qualitative data (lecture notes and books, policies, etc.) and 3. Systems concerning the administrative personnel.
- Electronic systems for evaluating personnel are in place. In these systems, data concerning research conducted by seniors or postgraduates are stored. In addition, teaching evaluation reports regarding satisfaction from the third and fourth year students as well as postgraduates are warehoused.

The system comprises the following categories:

1. Teaching Evaluation of courses from seniors related to the Erasmus Program

2. Research projects from seniors
3. Teaching Evaluation from graduate students
4. Research conducted from graduate students.

All the above data are analyzed, and inferences are presented for decisions to be made. Specifically, using various satisfaction measures, the average of each category and the deviation are computed. These measures are then forwarded to the faculty and the TAs who teach the course, the Chair and the Deputy Rector. Based on the results and after a sample of these analyses, suggestions are presented.

Systematic evaluation of the senior’s research projects is conducted to determine the quality of the education as well as the faculty’s performance.

The above evaluations are also continued for the postgraduate education.

For all the obtained statistics, qualitative indices are determined and they are utilized to decide of how quality can be maintained in the Department. The indices are also exploited to create benchmarks between their undergraduate/graduate programs and the corresponding similar programs in the Nation or Abroad.

Panel judgement

Principle 7: Information Management	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

The AP observed that the Department complies with all procedures followed by prestigious universities. The Department clearly details the process evaluation and materializes well the information received from the data.

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 Programme compliance

As expected, the main source of public information regarding the Department of Statistics is the departmental website <https://www.dept.aueb.gr/stat> which includes a number of sub-links providing extensive information on the departmental profile, teaching, research, administrative staff, its Undergraduate Study Program, its postgraduate study programs, its quality policy, the research activity and output, information, facts and activities relating to alumni, information and activities of interest to the academic, student and local business community as well as the public at large.

Information included in the departmental profile is its historical evolution and its administrative structure and services, the academic committees and its facilities and laboratories infrastructure.

The public information regarding the departmental human resources of teaching, research and administrative staff includes lists of names with phone numbers and e mail addresses. For faculty and other research personnel a brief biographical sketch, professional and research activities as well as more detailed biographies are included. The research interests, activities, publications and conference presentations of the faculty members are listed as well.

The public information available to the undergraduate students in terms of their Programme of Study requirements, procedures, progress, schedules, course content and materials is quite comprehensive and extensive. Additionally, any certificates or other academic and/or administrative documents that students need are easily accessible and obtainable. Anybody can access the detailed undergraduate programme student guide in which all course outlines, syllabi, material, instructor policies, learning outcomes and student performance evaluation guidelines are included. The e-class platform is accessible by authorized users so that students can obtain course material and communicate with the faculty. Information is available about the practical training programme and its requirements, rules of conducting and writing a thesis, if so desired. ERASMUS programme information is also available by accessing the corresponding link for that programme office.

Information available for interested individuals in postgraduate studies includes all postgraduate degree programme descriptions with relevant information for each one and for PhD candidates the requirements, the faculty research interest areas, the programme structure, facilities and tuition.

A substantial portion of public information relates to the department’s policy on Quality Assurance. A full disclosure of the structure, legal framework, operating procedures and responsibilities of MODIP is available. A list and description of departmental strategic goals with accompanied measured levels of current performance and targeted values of goal attainment is published. Several statistics pertaining to student population profile, their progress and the availability of learning resources. Even a study on the reasons that may affect the extension and/or delay of the student expected time of graduation is included. The annual Internal Evaluation Reports published by OMEA and the External Evaluation report submitted to ADIP by the External Evaluation Committee are also publicly available. A list of all PhD graduates with their academic credentials and career accomplishments is published in order to demonstrate the academic quality of the department.

Assorted academic and professional events such as seminars or conferences organized by the Department are obviously part of the displayed public information on the website and are also announced via the departmental newsletter of distributed pamphlets, as it may be appropriate.

Organized student social and special interest activities, including those of volunteer nature, as well as scholarship sources or opportunities are also publicly disseminated via the website. University wide and/or departmental student services such as Career Office, Social and Psychological support, Student Complaint handling procedures, Student Advisors and other services are public information.

Finally, the Career Office is the main public channel for information exchange and support between the Department and its graduates. The Department has undertaken and has published a study about its graduates concerning areas of interest such as their career development and progress, their work experience, the value of their Programme of Study as it is related to their job responsibilities and performance.

Panel judgement

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

Panel Recommendations

Overall, the AP feels that the public information which is mostly disseminated via the departmental website is extensive, valuable and highly informative. The website interaction is in both Greek and English. However, the AP also noticed that the Proposal for Accreditation Report in its presentation of the relevant section for Public Information is not well organized in terms of discussing the website content.

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

The annual Internal Evaluation Review of the Department is managed by MODIP in cooperation with the OMEA of the Department. MODIP and OMEA are tasked with collecting and entering in the departmental information management subsystem, on an on-going basis, the data required for the assessment of the quality of the Undergraduate Programme of Study and the Department. MODIP has submitted to the AP the questionnaire that is given as a guide to OMEA for the collection of the data categories to be processed and analyzed relative to the Quality Assurance of the Programme of Study and other operational issues of the Department. The resulting document from that process is the annual Internal Evaluation Report. The latest annual Internal Evaluation report (September 2019) was submitted to the AP to assist in their evaluation of the programme. This document can be found on the department's website since it is considered a public document.

MODIP has the responsibility to ensure that the internal evaluation review process and the resulting document follow the requirements for Accreditation as dictated in ADIP's adopted System of Quality Assurance (ΕΣΔΠ). The management process followed by MODIP is guided by the university's Manual for Quality Assurance (<https://www.aueb.gr/el/content/egheiridio-poiotitas>) and the distributed guidelines and questionnaires to OMEA are designed to serve that purpose.

The AP examined both the Proposal for Accreditation and the MODIP questionnaire. The questionnaire follows the format and includes questions like those that ADIP uses to evaluate

different aspects of the Programme of Study and the departmental quality. In fact, the questions relate directly to the 10 main Principles on which the Programme of Study is accredited. For example, questions related to the results of student evaluation of courses, the changing business environment and the potential Programme of Study modifications needed to meet the challenges, data on the faculty teaching and research activities and others.

The Department has in place a formal procedure for the assessment and implementation of the results of the annual Internal Evaluation of the Study Programme and the Department. The process involves the OMEA, the MODIP representative of the Department, the Department president, and the MODIP president. The Proposal for Accreditation discusses the findings and the associated corrective actions, if any, that are to be acted upon and which may result in a modification, adjustment or revision of the Programme of Study. Existing Key Index Indicators (KPIs) or new ones that may be defined are for the most part the quantitative measurement tools for the assessment or goal improvement targets that are associated with any changes.

The Proposal for Accreditation shows that a major Programme of Study revision was implemented in 2018 and resulted in major changes examples of which are mentioned in the Proposal of Accreditation and include areas such as:

- Revision of the process for re-evaluation, re-adjustment and/or update to course content
- Better definition of an action plan to enhance the good features of the Programme of Study and correct or improve identified or perceived deficiencies
- Focus on continuous improvement of teaching practices and enhancement of learning outcomes

Other minor adjustments have resulted in departmental practices and procedures. It is worth mentioning that parallel to this revision and based on input from both undergraduate and graduate students, the departmental website menu was redesigned to incorporate a sub-link of Quality Assurance related to departmental quality policy and assorted issues related to it.

Panel judgement

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

Panel Recommendations

The Proposal for Accreditation describes the process of implementing modifications or revisions to the Programme of Studies which follows procedural guidelines suggested in the university's Quality Assurance Manual and demonstrated by a few examples. The AP recommends that the

description of the process be converted into graphical form, such as a flow chart (which is part of each procedure example in the manual) for better documentation and easier implementation.

Principle 10: Regular External Evaluation of Undergraduate Programmes

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

HQA is responsible for administrating the programme accreditation process which is realised as an external evaluation procedure, and implemented by a committee of independent experts. HQA 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

The Statistics Department was evaluated by an ADIP appointed four-member committee in 2014. The evaluation was not specific to the Undergraduate Programme of Studies but rather on several quality issues related to teaching practices, academic personnel research performance, facilities infrastructure, financial budgetary management and its role in the community at large. This Committee is assigned the task of evaluating the Undergraduate Programme of Studies for the purpose of granting accreditation.

The AP examined the External Evaluation report which is also accessible on the Department website (https://www.aueb.gr/sites/default/files/modip/Ext_Eval_Report_Statistics.pdf). It appears that in that report the External Evaluation Committee made a number of positive comments and observations about the Department, including the structure and balance in the curriculum as well about the quality and number of faculty publications. On the research aspect the Proposal for Accreditation indicates that substantial progress and activity has occurred since the evaluation to further enhance and promote this important positive comment of the evaluation.

Related to the recommendations and suggestions for improvements made by the External Evaluation Committee, the Department made available to the AP a Progress Report, basically composed of two tables, in addition to an overview description of actions that were discussed and undertaken. For each recommendation of the External Evaluation Committee the Action Plan Table displays the desired result, the action to be taken, the responsible individual(s) for the action to be taken, the timetable for implementation and the resources required to manage

the action. The Action Implementation Plan Table displays the results of each action taken, the percent completion at the time of the Proposal of Accreditation submission and the methodology used for the completion of actions, most of which show 100% completion and a few above 90% completion. The tables are well organized.

Panel judgement

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

Panel Recommendations

PART C: CONCLUSIONS

I. Features of Good Practice

- The respectful, supportive, and collaborative relationship between staff and students.
- Well organized and very informative Student Handbook.
- Dedication of teaching staff to the goals of the Department and student support.
- Good relationship between the Department Faculty and the business community.
- The Study Programme includes elective courses illustrating how statistical knowledge and methodology is utilized in other disciplines.

II. Areas of Weakness

The lack of a formal interaction and communication vehicle between the Department and the business community.

III. Recommendations for Follow-up Actions

- The AP recommends that IEG/OMEA ensures a stronger involvement of the student body, including returning Erasmus students, in the annual quality assessment review, as they are the main beneficiaries of the exercise.
- The Department should embark on an on-going documentation and compilation of key, repeatable ongoing operating procedures and processes which are deemed to be of importance in an easy to follow graphical form, such as a flow chart. Such a collection of documents would standardize these procedures and serve as a “standards manual” that can be followed to ensure consistency of implementation (execution).
- Enhance the informal contacts and information flow with stakeholders through their systematic actions that may include:
 - Establishment of an Industrial Advisory Board that will provide input in programme design and development.
 - Drawing up case studies, jointly by academic staff and industry experts, reflecting the challenges of the Greek business environment.
 - Participation of industry experts for interactive discussion of a specific case in the stakeholder’s field of activity with students, within the context of a course or as visiting speakers.
 - Establishment of student excellence awards sponsored by the stakeholder community.
- Enhance the participation of alumni in quality improvement activities:
 - Maintain updated records about alumni (contact data, employment).
 - Actively pursue periodic feedback regarding matching skills to business needs and trend.

- Support the eventual creation of an alumni society by providing resources such as internet access and support by the Career Office.
- Departmental Quality Performance Indicators should be expanded to monitor, and measure quality of research output based on international classification standards.
- Introduce peer evaluation review for promotion of best teaching practices.
- The Department in cooperation with other departments should develop a more extensive list of courses in English that will enable the offering of a full semester to incoming Erasmus students.
- It is recommended that the Department establishes a formalized “ADVISORY BOARD” involving Faculty, external stakeholders and alumni to improve interaction and communications to explore common interests and which may result in mutual benefits.

IV. Summary & Overall Assessment

The Principles where full compliance has been achieved are: 1, 2, 3, 4, 5, 6, 7, 8, 9 &10

The Principles where substantial compliance has been achieved are: none

The Principles where partial compliance has been achieved are: none

The Principles where failure of compliance was identified are: none

Overall Judgement	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

The members of the Accreditation Panel for the UGP “Statistics” of the Athens University of Economics & Business

Name and Surname

Signature

Prof. Stergios Fotopoulos

Washington State University, United States of America

Prof. Emeritus Spyros Economides

California State University, United States of America

Assist. Professor Michael Talias

Open University of Cyprus, Cyprus

Dr Vitantzakis B. Nikolaos

Member of Economic Chamber of Greece, Greece