Accreditation Report
for the Undergraduate Study Programme of:

Statistics and Actuarial Financial Mathematics

Institution: University of the Aegean
Date: 11 December 2022
Report of the Panel appointed by the HAHE to undertake the review of the Undergraduate Study Programme of Statistics and Actuarial Financial Mathematics of the University of the Aegean 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 Undergraduate Study Programme of the Department of Statistics and Actuarial Financial Mathematics of the University of the Aegean comprised the following four (4) members, drawn from the HAHE Register, in accordance with Laws 4009/2011 & 4653/2020:

1. Professor George Michailidis (Chair)
   University of Florida, USA

2. Professor Stergios Fotopoulos
   Washington State University, USA

3. Professor Emeritus Athanasios Gagatsis
   Gagatsis University of Cyprus, Cyprus

4. Mr. Stylianos Sfondylis
   Student, Aristotle University of Thessaloniki, Greece
II. Review Procedure and Documentation

The External Evaluation & Accreditation Panel (henceforth EEAP) conducted from December 5-10, 2022 the accreditation evaluation of the Undergraduate Program (henceforth UP) of the Department of Statistics and Actuarial Financial Mathematics (henceforth DSAFM; in Greek ΣΑΧΜ) of the University of the Aegean.

The EEAP could not visit the Department physically and conducted the accreditation evaluation via Zoom teleconferencing.

The EEAP received in advance from HAHE the following documentation and supporting material related to the UP of DSAFM.

1. The guidelines for accreditation created by HAHE.
2. The mapping grid created by HAHE.
3. A tabulation (prepared by HAHE) of the scores of the program regarding the quality indexes for the years 2016 – 2019.
4. The accreditation information for the program prepared by DSAFM.
5. A set of annexes to the accreditation proposal, including the study guide, course descriptions, etc.
6. Statistical data regarding DSAFM and the specific program of studies.
7. The Quality Assurance policy of the specific program of studies.
8. A set of documents presenting quality indicators both for the Department and the UP.
9. The report of the 2013 external evaluation conducted by the Hellenic Quality Assurance authority for the DSAFM.
10. A comparison of the UP of DSAFM with those of the Department of Statistics at the Economic University of Athens and the Department of Statistics and Actuarial Science of the University of Piraeus.

On Monday, December 5, 2022, the EEAP held a private meeting to discuss the review process, allocate tasks, and identify possible issues to be addressed during the visit. Subsequently, the EEAP had a meeting with Professor Elena Theodoropoulou, Vice-rector of Academic Affairs and Student Welfare and Head of MODIP, and Associate Professor Stelios Zimeras, Head of the Department. Professor Zimeras gave a presentation focusing on the (a) recent history, (b) academic profile, (c) current status, and (d) strengths of the Department, as well as some issues that require further attention. Both Professor Theodoropoulou and Zimeras addressed questions by the EEAP aiming to clarify certain points made during the presentation. Subsequently the EEAP met members of OMEA and MODIP as well as MODIP staff. The Chair of OMEA, Prof. Alex Karagrigoriou made a presentation discussing Quality Standards and summarizing all the information collected by OMEA and addressing in detail the 10 Principles that HAHE uses for accreditation purposes. A discussion between OMEA/MODIP and EEAP members ensued, clarifying points made during the presentation. The EEAP also had the opportunity to review student assignments, theses, exam papers and examination material, which were made available by the OMEA. Finally, the EEAP looked at the revisions made in the DSAFM undergraduate programs based on the recommendations of the 2013 external
evaluation of the Department. A discussion about this topic is provided in subsequent sections of the report. The day concluded with EEAP’s debriefing.

On Tuesday, December 6, the EEAP (via teleconference) (a) met with members of the teaching staff, (b) representatives of students of the UP, (c) members of the administrative staff, and (d) select former students, employers and social partners. Due to the remote nature of the meeting, the EEAP did not have the opportunity to observe teaching. A short debriefing meeting amongst the EEAP members ensued. The day concluded with a closing meeting with the Vice-Rector, the Head of the Department, and OMEA and MODIP members to discuss informally the key findings and recommendations of the EEAP.

The report of the EEAP was prepared in the period December 7-10. The final document was submitted to HAHE on Monday, December 12, 2022.

The schedule of the two-day long e-visit was well structured and organized and the Department, OMEA and MODIP provided extensive material to EEAP for its report. Hence, the EEAP obtained a comprehensive picture of the Department’s vision, educational programs, infrastructure and efforts for education of the undergraduate and graduate students.

The quality of the UP is in accordance with international standards.

The EEAP noted the dedication and commitment of the teaching staff, the Department’s efforts to develop rigorous procedures for monitoring the assurance quality, and, in general, the effectiveness of the UP. As also indicated in the report, there is always room for further improvements in the teaching and training of the students and the UP. Some of the weaknesses noted are due to factors beyond the control of DSFAM or indeed the University. Key factors include the very large number of incoming first year students, a process regulated by the Ministry of Education and Religious Affairs (thereafter called ME for brevity) and the building infrastructure of the Department.
III. Study Programme Profile

DSAFM was originally established in 2000 as the Department of Statistics and Actuarial Science. It was renamed as the Department of Statistics, Actuarial Science and Financial Mathematics in 2005, and subsequently merged with the Department of Mathematics in 2013. DSAFM was established in its current form in 2018, after it split from the Department of Mathematics.

During the 2022-23 academic year the Department has 14 active faculty members - 4 full professors, 5 associate professors, 4 assistant professors, 1 lecturer and one EDIP member. There are 4 staff members that provide administrative support to the functions of DSAFM.

In the academic year 2021-22, there were close to 920 registered undergraduate students, while those in years 1 to 6 are approximately 570. Hence, the current ratio between permanent teaching faculty and students is 1:64 and for those in years 1 to 6 is 1:40. This is rather high by international standards and not conducive to the educational goals and mission of the Department. Three new faculty members are expected to join the junior ranks of the Department, in 2023 which will contribute to lowering these student-to-faculty ratios. The Department also expects that an additional four positions will be allocated by the ME in the near future further improving these ratios and also enabling the Department to enrich its course offerings.

Since its current formation in 2018, DSAFM regularly admits over 140 students, with the year 2021 being an aberration with fewer than 100 students. On the other hand, its official request is for an entering class of about 100 students. It is of paramount importance that the ME addresses this situation which is counterproductive and has a negative impact on the quality of the UP. This problem can be dealt with by either increasing the size of the faculty or reducing the number of incoming students or both. The DSAFM offers many courses; 18 are required to be taken by all students, another 22 are required electives (namely, students depending on their interests in the three thrusts of the UP, namely, Statistics, Actuarial Science and Financial Mathematics are required to select from them) and 44 are pure electives. Successful completion of the undergraduate degree requires 34 courses (18 mandatory, 9 mandatory electives, and 7 electives), plus English II and II, corresponding to 240 ECTS. The UP is well structured and provides a nice balance between mandatory and elective courses to students as they progress through the program; for example, the first two semesters are heavily loaded with mandatory courses, while in the last two semesters all courses are (mandatory) electives. The DSAFM adopted the recommendation of the 2013 external evaluation report and added 25 elective courses in its catalogue.

The majority of the students in the UP takes much longer than the nominal 4 years (8 semesters with 4-5 courses/semester) to complete their degree. According to the data provided to the EEAP by OMEA and MODIP, the average graduation time significantly exceeds the allotted time of 4 years and this timeline has held steady over the years. There is a rather small percentage of students that graduate within four years (~17% in the academic year 2021-22); this percentage increases to around 50% for those graduating within 6. The average Grade Point Average of graduating students is ~6.5/10.

The EEAP feels that this is broadly unsatisfactory and primarily reflects inadequate preparation at the secondary education level of a portion of the students admitted to DSAFM, lack of
systematic attendance due to the geographics location of the Department and possibly lack of strong interest in the subjects covered by the UP.

In view of the information above, the EEAP strongly recommends that the number of admitted students is reduced to no more than 100, which also corresponds to DSAFM’s request to the ME.

Further, based on feedback provided to the EEAP by faculty members of DSAFM, attendance of classes by a good portion of the student body drops after the first year. The EEAP strongly believes that the teaching staff should leverage electronic platforms and the experience of remote teaching acquired during the Covid-19 pandemic to facilitate training all students admitted to the program, so that graduation rates improve, and the graduates are able to seek employment after completion of their studies.

The last external evaluation of DSAFM took place in 2013. The EEAP commends the Department for implementing many of the recommendations proposed. The most important revisions related to the UP are: (i) changing the semester that certain courses are offered, (ii) increase the number of elective courses offered, (iii) introducing take home assignments, (iv) reduce the size of the freshman class of the UP, and (v) explore co-teaching of mathematics courses with the Department of Mathematics. The DSAFM successfully addressed the first three recommendations. As previously mentioned, recommendation (iv) can only be implemented by the ME; nevertheless, the EEAP concurs with and remakes this recommendation. Finally, the EEAP agrees with recommendation (v) and also recommends that DSAFM explores co-teaching of courses with the Department of Computer Science that is also physically located in the campus on the island of Samos. Finally, the EEAP would encourage the Department to add recitation and lab sessions to more courses through the employment of Ph.D. students.

The recommendations of the external evaluation that were not followed to date will also be discussed later in the report. It is the opinion of the EEAP that all the changes outlined above have contributed positively to the improvement of the UP.
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 realize the programme’s strategic goals and it will determine the means and ways for attaining them; it will implement the appropriate quality procedures, aiming at the programme’s continuous improvement.

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

a) the suitability of the structure and organisation of the curriculum;
b) the pursuit of learning outcomes and qualifications in accordance with the European and the National Qualifications Framework for Higher Education.
c) the promotion of the quality and effectiveness of teaching.
d) the appropriateness of the qualifications of the teaching staff.
e) the enhancement of the quality and quantity of the research output among faculty members of the academic unit.
f) ways for linking teaching and research.
g) the level of demand for qualifications acquired by graduates, in the labor 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
Findings:

**Appropriateness of the Program:** To establish quality assurance in their academic unit, the DSAFM has proposed evaluation and validation procedures in the form of questionnaires and metrics (quantitative measures) that assess the following areas:

1. **Each course is assessed on:**
   - The role/purpose of the course
   - The content of the course
   - The use of textbooks, exercises, articles etc. provided to the students
   - The satisfaction level of such material
   - How easy is it for students to understand the material
   - How easy is it for students to access references
   - The degree of overlap among courses
   - Degree of difficulty of each course
   - The integration of the labs within a course
   - The usefulness of labs in a course
   - The grading transparency and grading criteria

2. **Exam/quizzes, projects**
   - Is there sufficient preparation time for an exam?
   - Is there sufficient time allowed to prepare a final project for submission?
   - Can students locate enough reference material to expand a specific project?
   - How helpful was the course material in developing a project?
   - Did the faculty encourage students to raise questions?
   - How consistent is the faculty in engaging with the students?
   - How accessible is the faculty to their students?

3. **Faculty evaluation procedure**
   - Is the faculty well organized in preparing the course, grading, and responding to students?
   - What is the degree of passion and enthusiasm of the faculty towards the subject matter?
   - How much does the faculty encourage students to participate during a lecture?
   - Is the faculty encouraging and accepting of critical/logical comments made by the students based on their understanding/nonunderstanding the material?
   - Is the faculty aware of how much material is understood by the students?
   - Is the faculty considered fair by their students?
   - Do the students consider the faculty accessible?

4. **Labs**
• What is the level of difficulty each year?
• Are there sufficient notes provided to the students to conduct the labs?
• Is there sufficient information to conduct experiments/solve problems?
• Is there sufficient time allotted to complete the experiment?
• Is there a plan to implement the results from the experiments?

5. Students’ responsibilities:

Do students attend courses?
Do students attend labs?
Do students participate in projects?
Do students participate in problem solving?
Do students study the course material?
Do students devote time to preparing ahead of time for new material?

Continuous improvement: Based on the questionnaire results, there is evidence that the majority of faculty meet the criteria for fairness in the areas of examining, grading, understanding the appropriate level of course material, learning criteria, applications to make sure that students can communicate subject matters, and above all there is transparency between students and faculty. All of them constitute elements of devotion and commitment to a successful program.

The indicators and measures provided also show continuous improvement and the program emulates competitive successful programs at a national and international level.

Quality Assurance policy: As shown in the UP provided material section B7, illustrated histograms cover statistics, including averages, measures of dispersion and confidence intervals that covers year by year elements before the pandemic to present, indicating degrees of satisfaction in all fields stated above.

Goals: As illustrated in Paragraph 1, there is a strong element of transparency among faculty, between faculty and students, faculty, and clerk personnel, as well as between students and clerk. All the above show measures of clarity in terms of how the specific unit operates with the student population, in terms of timing, what to expect from the students, and how to select the best teaching method to achieve productive learning/research outcomes.

Goals paired KPIs: The DSAFM seeks to implement a unique national version of mathematical education by emphasizing a more contemporary approach to mathematical philosophy by focusing on the applications to economy, risk analysis and actuary. This requires a high level of academic expertise, which the department possesses, and this knowledge is conveyed to the student population in a very effective form. The faculty have shown excellent teaching skills as shown in the evaluation process and student satisfaction
appears to be at a high level. The statistics concerning learning outcomes show a high degree of competency in all areas.

**Monitoring updates:** The basic role and goals set in the Department is to create an organization that is centered in an environment that ensures quality education and conducts research at the highest level. Thus, the students attending this unit are well equipped to help society by providing knowledge and competitiveness in the national and international arena.

**Analysis:**

The role of the Department is to produce well balanced scientists who can combine complex mathematical methodologies, such as probability theory and stochastic analysis, with more applied subjects, such as economic theory, in a way to draw decisions on a practical or even theoretical level. Their role is to help sectors related to finance, investments and various professional organizations in medicine, agriculture, science, and so forth.

To accomplish such goals, an organizational mechanism has been established to provide updates on a yearly basis. Its present form shows a contemporary style that is comparable with many well-known established national programs in the same field. Our panel feels that given the limited resources this isolated department has distinguished itself as one of the most productive teaching and research program.

**Conclusion:**

Based on the findings and the analysis stated above, the UP is in compliance with the Quality Assurance guidelines. However, certain issues require attention by the Department, as outlined in the recommendations below.
Panel Judgement

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Panel Recommendations

- The current version of the UP requires both additional teaching and clerical personnel to serve the Department well. The current number of faculty is below the median number of faculty required to run a good program. The state is aware of this situation and has proposed additional funds to increase the number of FTE’s.

- To increase interest, adaptation, and sense of ownership to the town, the faculty needs to have more financial support from the state beyond what they receive from local industry. This will result in an increase in research productivity and accumulation of new ideas to share with their colleagues and their student population.
Principle 2: Design and Approval of Programmes


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

Findings and Analysis:

Well-defined program: The DSAFM allows students to study at the intersection of mathematics, statistics, economics, and more applied areas of finance. Within the curriculum, the courses are organized by semester. The first two semesters focus on the mathematical foundations which includes linear algebra, calculus, introduction to probability theory, introduction to actuarial mathematics, introduction to financial mathematics, etc. The second year includes differential equations, probability micro-economics, financial markets, statistics, data analysis, etc. Third year courses offered include regression analysis, stochastic analysis, advanced financial mathematics/models, advanced actuarial mathematics, advanced courses of life insurance, sampling theory, statistical quality control, and many other elective courses. The fourth year offers many advanced courses in probability, statistics, computing statistics, biostatistics, stochastic models, from a variety of elective courses. In addition, students are responsible for completing a thesis and participating in internships.
The academic profile of the current program is well-defined and appears to be similar to well-known established programs and satisfies the requirements of a strong unit. The principal requirement for students to graduate from the Department is to complete 18 core courses and, in addition, a similar number of elective courses (nine from the unit and seven from a list of electives). The list of elective courses must lie in the areas of mathematics, information theory, operation research, statistical computing, actuarial sciences, and financial mathematics.

On a yearly basis, a committee of the undergraduate program revises/recommends new courses, which students require to complete towards graduation. These courses follow societal needs and the competitiveness of the UP.

**Institution Strategy:** Although there are no majors or minors in the Department, students could deepen and expand their basic knowledge by selecting various combinations of courses in the fields of statistics, financial mathematics, and actuarial sciences. Graduates of this unit will have the scientific knowledge that allows them to address complex situations and problems that often occur. Their knowledge would enable them to design insurance files, financial documents, pensionable designs, and to recommend investment strategies, etc.

**Students’ Activities:** A small number of students participate in various exchange programs offered by ERASMUS. In this case, equivalent multiple programs with similar curricula exist throughout Europe that students can attend. Further, students can transfer credit hours to any of the ERASMUS programs. An important activity offered by the unit is the strong encouragement for the students to participate in yearly/semester conferences and seminars held in the unit or at the national level at various locations in Greece. These activities have either research or teaching appeal. They help students to present themselves and learn how to face an unfamiliar audience.

**Graduates:** In interviewing a small group of graduates from the specific unit, the results of their experience in the Department were unanimously positive with all of them (no exception) offering thoughts of how the experience from the unit helped them to obtain not only a good job, but a dream job!

**Internship:** Students are required to have short-term work experience (eight weeks) before graduation. Appropriate center offices at the university gather such internships and inform suitable parties of interest.

**Linking Research and Teaching:** Viewing the UP DSAFM material section B5, it is noticeable that professors, help students interested in a Thesis (Πτυχιακή Εργασία) in their last year of study to select their final thesis topic by introducing articles in areas that were authored by the professor. In this way, students have a better sense of how to narrow down the field on what should be their thesis focus. This approach is true for many professors teaching at the last years of the program.

**Conclusion:**
As shown from the findings/analysis, the Department applies the guidelines well to expect high level teaching learning outcomes. This concludes that the Department is in conformity with those goals set by the National Qualifications Framework for Higher Education.
Panel Judgement

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Panel Recommendations

- The EEAP recommends that courses such as Probabilistic Programming, Deep Learning, Bayesian Learning, Statistical and Machine Learning, Advanced Computing for Finance, Machine Learning for Finance, Computing for Finance with Python, should be added to the list of elective courses. These courses satisfy the need for improving organizations and automating decision making and hence they would strongly enhance technical and job skills of the program’s graduates.
- Faculty members have expressed concerns regarding the small number of participants in the ERASMUS program. One answer to this complex problem is more funding for students.
Principle 3: Student-centred Learning, Teaching and Assessment

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

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

The student-centred learning and teaching process

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

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

Study Programme Compliance

Findings:

The EEAP met with 8 students ranging from freshmen to seniors, a group of teaching faculty, and administrative staff to evaluate the role and scope of the learning process. Among all the issues considered in the discussion, there was agreement by all parties on most of them. One of the controversial issues brought up for discussion was a suggestion from the students. The students proposed the idea of introducing a mid-term exam, and the reevaluation of the entire UP in terms of revising the core courses. Further, the students suggested certain courses to be added as required ones. The EEAP believes that the current availability of courses as elective
ones is adequate. Instead, the Department should focus on offering new courses that cover new topics, such as those suggested under Principle 2.

For students lagging, the DSAFM offers tutors to help them and bring them back to a level of understanding.

Further, there information management system of the University allows students to electronically access their progress to date and assess their progress towards their degree requirements. Another facility service offered by the management system allows students to express dissatisfaction for various issues related to grading, the faculty’s teaching method, etc. These issues are handled either by the Head of the Department or an appointed committee that can resolve them in most cases; otherwise, they are forwarded to be addressed at a higher administrative level of the University.

Student representatives recommended that the DSAFM create a formal office that advises them regarding career opportunities. The EEAP would also recommend that the Department organizes career days by inviting industry representatives to present their company profiles, collect curriculum vitae and also directly recruit students close to their graduation date.

Analysis:

Based on faculty transparency, students and faculty should have periodical open discussions addressing issues concerning curriculum and pedagogical strategies. As expressed in the previous principle, students need to be encouraged to not only participate in conferences and seminars but also to initiate presentations of analyzing various articles of the area the unit offers or even presenting their own work that can be co-authored with an advisor. This boosts confidence, enthusiasm, and passion in the student population for the subject. This will also be a tremendous advantage for the student in deciding on the next step and phase of research.

Conclusion:

As shown in the above analysis, student learning centers constitute an important place where students can interact, be influenced, be driven, be engaged, be the voice of many students for issues concerning effective learning, living environment, and many other relevant activities. Thus, such places entail continuous considerations of the program delivered and the assessment of the related outcomes.
Panel Judgement

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Panel Recommendations

The student center is not used at full capacity. Students need to be informed and encouraged to use it. Further, continuous communication should be encouraged between faculty and the student body that would lead to better learning outcomes and structure of the UP.
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

Findings:

Advisors and their role: Faculty members are randomly assigned to provide guidance to students based purely on their own experiences regarding education and career choices/options.

At the beginning of each academic year the Head of the Department assigns advisors to all new students admitted to the UP. These advisors work with the same student throughout the four-year program. The student’s responsibility is to visit his/her advisor at least twice a semester. The advisors’ responsibilities are as follows:

- Ongoing guidance and support to assist students in finding the appropriate educational path to accomplish their goals.
- Assist students with their selection of a thesis topic.
- Provide assistance concerning professional orientation in relation to student’s interest.
- Provide assistance/help to students to identify graduate programs in national or international institutions.
- Provide information about scholarships and universities that offer relevant types of education.
- Assist students in navigating the various administrative departments’ requirements in terms of financial aid forms, ombudsman responsibilities, transfer credits, etc.

Award system: The Department has set incentives to reward students who achieve excellent academic performance. Such rewards include prizes, scholarships, and opportunities to expand their knowledge in many different directions both during the program and after graduation. The prizes are in the form of money that is offered by the mayor and local industries.
Graduation: Upon graduation, students receive the diploma that follows the prototype that is developed by the European Committee. The members of the European Committee provide independent elements that are used to evaluate the level of the university, background, content, and the status of studies from where the student successfully receives the degree. In addition to the diploma, students receive a copy of all transcripts for possible use if intending further study.

Analysis:

Based on the findings presented above, the EEAP analyzed and carefully examined whether the Department had set up a process and tools to collect information to determine how the student population progresses each year. In addition, on a yearly basis, the Department keeps track of enrolment numbers and the average GPA of the graduated population. It is believed that all the above elements are set and are in compliance with the procedures and policies as those set by European academic departments and institutions in line with the Lisbon Recognition Convention. Finally, students receive documentation describing the qualifications obtained, including context, level, content of status of the studies that were pursued and successfully completed.

Conclusion:

According to the documentation, presentations of the faculty, student representation and selected administrators, the panel concluded that the Department’s policies and procedures regarding awards, recognitions, graduation, graduation rate etc. are at the same level as other successful peer institutions at the national and international level.

Panel Judgement

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Panel Recommendations

- The EEAP believes that in addition to faculty advisors, there is a need for professional advisors that would provide information and feedback to the students in additional directions within the specific areas of the Department and also regarding career and graduate education opportunities.
- The EEAP believes that the award system is too narrow and limited. The DSAFM should strive to find additional resources for enhancing the pool of awards available.
Principle 5: Teaching Staff


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

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

Study Programme Compliance

Findings:

Faculty and Staff: Based on the documents provided, during the 2022-23 academic year, there are 4 Full Professors, 5 Associate professors, 4 Assistant Professors, 1 Lecturer and 1 EDIP member. Further, there are 4 administrative staff members. The gender proportion within the faculty consists of 13 males and 2 females. Recent promotions include one faculty member from the Associate to the Full Professor level and two from the Assistant to the Associate Professor level. To date there have been no retirements or resignations from the faculty ranks of the DSAFM. Further, three new faculty members have been hired in the last three years. However, the Department expects three junior faculty members to join its ranks in the next calendar (2023) year. Finally, one faculty member taught in an exchange program (ERASMUS) and there were 4 visiting professors since the last evaluation of 2013.

Financial Support: The Department’s budget consists of the amount of 6.457,00 euros per year, an amount that has held steady for a period of time. The total monthly budget (salaries, benefits, etc.) that the Department receives from the state is 68.110,00 euros.

Faculty Activities: The faculty have published 470 articles overall since the creation of the Department. The last year showed 28 refereed publications and 4 non-refereed articles. There are reported 188 (cumulative) refereed contributions to national and international conferences, 4 of which were during last year. Further, there were reported 139 non-refereed attendances at conferences, 9 of which occurred in the last year. The faculty published 6 reference books last year out of 23 since the Department was founded. In addition, we found that the faculty have published all together 64 chapters in various editorial volumes. Of all these publications, there
were 36 awards and recognitions to various faculty in the Department. The Department did not receive any grants.

**Design and approval programs of studies:** Based on the documents presented, we found that the program of studies continuously revises and improves after an advisory committee meets, discusses and compares similar peer programs at the international and national level. The committee plans and organizes invitations from peer institutions for possible collaborated ventures. Faculty introduce policies and procedures after students complete a questionnaire related to the evaluation of courses, student evaluation attitude, the role of the advisor, why students were left behind, more automation, etc.

**Analysis:**

Based on the findings and the additional information presented to the panel group, the panel analyzed all components and found that there is a transparent methodology of how faculty recruit qualified teaching and research staff and offer them employment that recognizes the significance of teaching and research. The faculty understand the importance of scholarly activities and that is shown by the number of articles published throughout the years. It is also evident that faculty recognize the scholarly productivity of their fellow colleagues and promote and award them to higher levels as has been shown in the past years.

**Conclusion:**

Based on the above findings it is evident that the Department supports scholarly efforts, promotes scientific advances, and believes that their role is to encourage and support their students to reach high and succeed in any societal choice.

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**Panel Judgement**

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Panel Recommendations

- As mentioned earlier, the Department needs to get new faculty members at any of the three ranks. This is a necessity for the unit to cover more topics and advise more students. The MoE is aware of this issue, and it is expected that three new positions will be given to the Department.
- Although the research output produced from members of the Department is at a good level, what is missing, however, is the acquisition of grants. Both European Union and national research funding mechanisms exist and the members of the DSAFM should make every effort to apply for grants. Research funding would enable faculty members to support their research programs and provide additional resources to the Department.
- In evaluating the research productivity and given the knowledge the faculty possesses; it is evident that the faculty can without doubt supervise Ph.D. students (In the last 8 years, 4 doctorates have been awarded). EEAP believes that the department should evolve the ph.D. program so it can attract more students.
Principle 6: Learning Resources and Student Support

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

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

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

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

Study Programme Compliance

Findings:

An area of concern is that the DSAFM facilities are not concentrated in a single place, making it challenging for students to reach quickly different buildings. A total of 7 buildings are used for the UP that provide teaching classrooms, 3 laboratories, administrative offices, teaching staff offices, a library, and amphitheaters. There are some routes that can take from 15 minutes up to half an hour for students to walk between the teaching classrooms or go visit the department’s secretariat. The library is well equipped and provides Internet access for the students. There is also a library website that contains useful information. The classrooms shown to EEAP through a video presentation are equipped with projectors and white/black boards.

An area of great concern is the Department’s accessibility regarding people with disabilities. As mentioned in the description/guidelines regarding Principle 6, the DSAFM must consider the needs of all students, including those with disabilities. Based on feedback provided to EEAP by the Department, the EEAP concludes that: (i) at least 2/7 buildings seem totally inaccessible to students (for example, there is a height difference from the road to the entrance and there is no equipment -ramps, mechanical equipment- in place to allow students to access the building); (ii) at least for 5/7 buildings, the top floors are accessible through staircases and hence there is no equipment to transfer disabled students to higher floors.

The EEAP understands that many of these buildings are old and hence lack elevators or other mechanical support equipment. Nevertheless, the EEAP strongly recommends that the Department makes these accessibility issues a top priority to be addressed as soon as possible.
The University also provides psychological support to its members. The "Network of Counseling and Psychological Support Stations" aims to provide counseling services and primary psychosocial support to students, University employees and the local community; in addition, it provides coverage of educational needs and the development of research programs in collaboration with other agencies in matters of psychosocial needs, of clinical and counseling psychology. There is only one such station on the island of Samos with only one psychologist. This fact is concerning, while keeping in mind that this station is not only to support DSAFM’s students, since it is offered as a university’s service.

Analysis:

Based on the findings presented above, the EEAP believes that although the DSAFM has the basic facilities to support the students’ educational needs, these are not in general accessible to students with disabilities. The Department should also consider that this issue does not only affect people with more lasting disabilities, but also students with temporary injuries, professors with moving difficulties and in general, potentially a great number of people.

Conclusion:

The EEAP was surprised that accessibility issues have not merited more attention from the Department. The EEAP hopes that the Department will find a way to address the problem of accessibility on an all in all well-equipped facility.

Panel Judgement

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Panel Recommendations

- The DSAFM should come up with a plan in collaboration with the University Administration to create an academic environment accessible to all students, by equipping its buildings with all the necessary ramps, elevators and machinery that enables access.
- The EEAP recommends that the manpower of the Samos station of the "Network of Counseling and Psychological Support Stations" is strengthened.
Principle 7: Information Management

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

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

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

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

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

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

Study Programme Compliance

Findings:

The DSAFM uses OMEA-recommended processes and forms to gather data. The goal is to gather and analyze data and information coming from the Department. This is done using OMEA's unified electronic system. The Department's internal assessment findings committee, OMEA, which comprises of academics from many disciplines, has a key role in this process. The OMEA complies with the established system of quality management and obtains survey information—qualitative and quantitative—from the students regarding their all in all experience with the courses and their professors.

Satisfaction surveys were taken in place during the semester, but with a low percentage of participating students (15.18% in winter semester and 6.8% in summer semester of the academic year 2020-2021). There were also 19 courses with no participants in the satisfaction surveys regarding both semesters of the academic year 2020-2021. The students recommended that their satisfaction surveys should be taken more into account by teaching staff, a statement that may be correlated to the low participation.
Analysis:

The mechanism for gathering and analyzing student-related statistical data appears to be working effectively. However, EEAP found that just a small portion of students took part in the last evaluations.

Conclusion:

The Department has built an information management procedure which supports internal evaluations as well as accreditation procedures. EEAP concludes that the approved procedures and the levels of satisfaction shown by the surveys are sufficient. Low student involvement can be improved by the teaching staff encouraging them more. Students also believe that additional measures after analyzing the data can be instituted, so that the evaluation surveys can become more informative and used to guide the UP.

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Panel Recommendations

- The DSAFM should begin gathering information on graduates' professional choices and student employability. This information has the potential to build future connections and engagements with industry, in addition to helping the Department in assessing its ability to place its graduates in the workforce.
- Adopting specific measures to improve student response to the teacher evaluation, such as more encouragement from the teaching staff.
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

Findings:

The EEAP believes that the University of the Aegean and the DSAFM have established a comprehensive public information system based on feedback from the Department Head, members of the MODIP and OMEA, faculty, secretarial staff, and students. The University's and the Department’s websites, as well as all material made available, were reviewed by the EEAP for verification of important information being shared with students, faculty members, outside partners, and the general public.

Analysis:

The Department has its own website (https://www.actuar.aegean.gr/index.php/en/) that provides a wealth of information regarding courses, teaching staff, regulations of the program etc. The students can also find useful contact information, so they can communicate easily with the secretariats and the teachers. There is also an English version of the website that contains information regarding the teaching staff and the UP. However, information on several topics such as daily news, job positions, cultural celebrations, Department panels, scholarships, semester timeline are usually only available in Greek.

There is also no indication that the Department’s website is accessible to people with special needs. It should be noted that the EEAP examined the Department's website in terms of international guidelines for website accessibility (such as WCAG) but found no proof in support of making any modifications for those with disabilities. Additionally, there is no information on how accessible the department's facilities are (such as maps with indications etc.). This is a great problem, regarding the department’s inaccessible environment for people with disabilities. Any information about who people with moving difficulties should contact in case of having accessibility questions is also absent.

Conclusion:

Based on the prior remarks, the EEAP advises that setting up social media profiles and an e-Newsletter would help the Department improve its electronic publication activity. This would allow the department’s numerous collaborators, school partners, social partners, and the
general public to receive more direct information on the department's significant educational, research, and cultural activities.

Panel Judgement

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Panel Recommendations

- The EEAP advises the Department to update its website in a way that is more appealing and user-friendly while still complying to international guidelines for adaptations for individuals with disabilities.
- The EEAP encourages the Department to consider developing an electronic newsletter as a tool to stay in touch with former students, peer Departments, social partners, and other stakeholders.
- The EEAP advises the Department to improve its English website and offer more information for people with disabilities.
- The EEAP advises the Department to set up social media pages to better inform students about its operation
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

Findings:

The evaluation of the Undergraduate Program (UP) is coordinated by the Department’s Evaluation Working Group (OMEA), supervised by MODIP and carried out in accordance with the procedures defined by HAHE. The UP is reviewed and revised on an annual basis with the participation of students and faculty members following well-established University procedures. These procedures involve teaching staff, OMEA, MODIP, the Department’s Assembly and the University Senate. The small changes that usually take place concern the content of the UP in relation to changing needs, the workload and the course of completion of the degree, the evaluation procedures of the students, and the offered support services to the students for their studies.

Analysis:

During virtual meetings with the Vice Rector of Academic Affairs Professor Elena Theodoropoulou, the Head of the Department Associate Professor Stelios Zimarras, and members of OMEA, the EAAP’s impression is that the results of the internal evaluation report are examined in detail and taken into consideration, as evidenced by both the implemented changes in the UP and tracking the impact of these changes to student outcomes. It should be emphasized that the UP’s action plan already includes attempts to remove negative aspects and strengthen positive points of the internal evaluation, with defined priorities that are based on the results of this evaluation. The EEAP observed that while the process of changing the program of studies may seem complicated this assures that the changes made have been thoroughly justified and have a lasting effect.
Conclusion:

The UP is regularly reviewed and revised with the participation of students and faculty members. The information collected is analysed and the program is modified according to the internal evaluation data. The student evaluations are a major part of the quality monitoring procedure. The students’ participation ensures quality results and guarantees that student opinion is represented. EEAP observes that the modifications take also into account the content of the Program in the light of the latest research in the given discipline and the changing needs of society. EEAP believes that future changes will involve newly arrived members of the Department contributing to further development and improvement of the existing UP.

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Panel Recommendations

It would be very helpful to share with the academic community the views of students on the improvement of the quality of teaching, the better organization of the courses, the cooperation with the teachers and their expectations from the studies.
Principle 10: Regular External Evaluation of Undergraduate Programmes

Programmes should regularly undergo evaluation by committees of external experts set by HAHE, aiming at accreditation. The term of validity of the accreditation is determined by HAHE.

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

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

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

Study Programme Compliance

Findings:

In order to investigate the program’s compliance with the QA principles and the principles established by HAHE, the EEAP reviewed all available documents, the website of the Department (http://www.actuar.aegean.gr/index.php/el/) and the website of the accreditation of the Undergraduate Program which contains all the relative material (https://www.actuar.aegean.gr/certification2022/). We also conducted extensive online interviews with the Vice-Rector for Academic and Student Affairs and President of MODIP, Professor Elena Theodoropoulou, the Head of the Department, Associate Professor Stelios Zimeras, members of MODIP and the members of OMEA, the Program’s faculty, administrative staff, students, graduates of the Program and external stakeholders. The Head of the Department, and the teaching staff presented and explained their vision and were willing to share with the EEAP all the documents and information that could make their work visible. Professor Alex Karagrigoriou and the other members of OMEA presented the progress report prepared by the MODIP, on the results from the use of the recommendations of the external evaluation of the Undergraduate Program of Study of the Department and the accreditation report of the committee. The whole presentation includes the External Evaluation Report of the University of the Aegean (2015-16) and the study of the accreditation report of the Undergraduate Program of DSAFM (ΣΑΧΜ, 2013). Key points of the accreditation report relate to the large number of the students in the Undergraduate Program, the transfer of some courses from one semester to another, the limited number of elective courses, the adoption of written essays instead of the traditional methods of students’ assessment and the collaboration with the Department of Mathematics in jointly teaching courses.

Analysis:
The Department has made significant efforts to satisfy the recommendations of the report of the UP:

- There is a constant request by DSAFM to the Ministry of Education to limit the number of the first year entering class to 100 to ensure the academic quality of the Undergraduate Program.
- During the 2019-2020 academic year, the transfer of courses between semesters was completed following suggestions offered by faculty and students.
- DSAFM offers new elective courses including Computational Packages, Decision & Game Theory, Differential Equations.
- Faculty members are committed to their research agendas and have made efforts to connect them with their teaching. The creation of two research-oriented laboratories is also a very positive action towards the improvement of the faculty’s research.

Moreover, the digitization of the Department’s communication with students with regular and on time announcements through the website, was a very positive action of the Department.

**Conclusion:**

The EEAP confirms that the Program has carefully and respectfully responded to the findings and recommendations listed in the 2013 External Evaluation Report. The value of the external review process to the functioning of both the Department and the Undergraduate Program is evident in the careful, epistemologically sound, and systemic program review and the changes initiated by MODIP which were implemented by the Program.

**Panel Judgement**

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**Panel Recommendations**

None
PART C: CONCLUSIONS

I. Features of Good Practice

- The UP of DSAFM is rather unique in Greece and combines solid mathematical training with extensive course offerings in the areas of Statistical Science, Actuarial Science and Financial Mathematics. These characteristics make the UP attractive to students that expressed a high degree of satisfaction about the material covered and their ability to pursue further studies in these areas or obtain good job in industry. Further, discussions with external partners suggests that the UP is well regarded and equips its students with the right skillset for careers in industry.
- Introduction of new courses (computational packages, game theory, differential equations) and with upcoming faculty hiring plans to introduce courses on machine learning and artificial intelligence into the curriculum.
- The faculty is active in organizing summer schools and conferences.
- The faculty has embraced and widely uses electronic platforms (e.g., e-class, moodle, etc.).
- Extensive use of electronic resources for communicating with students by the teaching and administrative staff.
- Leveraging capabilities offered by new technologies: access to software and library material through VPN, etc. Also, availability of high-performance computing resources through the Pythagoras computing cluster.
- Faculty is actively publishing in international journals, presenting in conferences, and engaging in international collaborations.
- The Department encourages and supports student mobility through different programs (e.g., Erasmus). It is an extremely positive and valuable development for students.
- The Department’s and the University’s computing infrastructure (Pythagoras computing cluster) is an asset.
- The faculty’s plan towards establishing Ph.D. programs, despite the already heavy administrative workload.

I. Areas of Weakness

- Space continues to be a big issue. The Department’s teaching, research and administrative functions are split between different buildings that in addition are not closely located to each other. The EAAP understands that this issue cannot be directly addressed by the Department. Nevertheless, it urges the University Administration to be more proactive and put in motion plans to resolve this issue.
- Certain buildings are not equipped to accommodate members of the academic community with mobility problems. The Department should make every effort to address this problem and also provide on its website the necessary information.
- Excessively large number of incoming students, significantly above DSAFM’s request for 100. The EAAP acknowledges that this constitutes a structural issue that only the Ministry of Education can effectively address.
- Various factors (distance, cost of living, etc.) contribute to the fact that many students do not systematically attend classes in person that negatively impacts graduation rates. The
teaching staff should make efforts using electronic resources to engage those students and improve their learning outcomes. Learnings from the Covid period could be useful towards this endeavor.

- The University provides psychological support services; however, manpower is limited (single psychologist) that may be inadequate for the needs of the members of the academic and the local communities.
- There is a little evidence that students actively engage in research projects in Statistics, Actuarial Science and Financial Mathematics.
- The grade of the final exam represents the standard way for student evaluation. Alternative mechanisms (midterms, quizzes, group projects) should be considered and implemented for most courses in the UP.
- DSAFM does not have an established mechanism to connect with industry.
- The English language webpage of DASFM requires improvement.

II. Recommendations for Follow-up Actions

- Develop mechanisms to engage in a persistent and continuous manner with industry. Such engagement can take various forms including career days, presentations by industry representatives on diverse topics, guiding students in developing soft skills useful in the marketplace, etc.
- Establish an alumni network to leverage the expertise and advice of former students.
- Offer an elective capstone course where students are exposed to real case studies in the areas of Statistics, Actuarial Science and Financial Mathematics. Engagement with industry partners can help in providing such real case studies.
- Even though the department gives the opportunity to students to attend courses from the Department of Mathematics and Computer Science, EEAP believes that the department should continue exploring synergies in co-teaching courses. The EEAP believes that such actions would lead to a better utilization of scarce faculty resources and enable DSAFM to enhance its course offerings in its core areas of Statistics, Actuarial Science and Financial Mathematics, while at the same time enabling the students of the Department access to foundational courses in Mathematics and Computer Science.
III. Summary & Overall Assessment

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

The Principles where substantial compliance has been achieved are: 1, 5, and 6.

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

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

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The members of the External Evaluation & Accreditation Panel

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<td><strong>4. Mr. Stylianos Sfondylis Student, Aristotle University of Thessaloniki, Greece</strong></td>
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