

ΠΑΡΑΡΤΗΜΑ Β10.2

ΕΝΕΡΓΕΙΕΣ ΣΥΜΜΟΡΦΩΣΗΣ ΜΕ ΤΙΣ ΠΑΡΑΤΗΡΗΣΕΙΣ ΤΗΣ ΕΠΙΤΡΟΠΗΣ ΕΞΩΤΕΡΙΚΗΣ ΑΞΙΟΛΟΓΗΣΗΣ ΤΗΣ ΣΧΟΛΗΣ εμφε

Η Αξιολόγηση πραγματοποιήθηκε τον Σεπτέμβριο του 2013, και η έκθεση των εξωτερικών αξιολογητών δημοσιοποιήθηκε το 2014 και είναι αναρτημένη στη σχετική σελίδα της ΑΔΙΠ (https://www.adip.gr/external/NTUA_ApplMathPhysical_2013.pdf).

External Evaluation Report for the School of Applied Mathematical and Physical Sciences.

Final Conclusions and recommendations of the EEC (**in red**)
and School's compliance (**in black**)

Grading + Curriculum

Consolidate overlapping courses, and reduce significantly required courses towards a degree.

Overlapping between courses has minimized by 10% and, required courses towards the degree, was equalized for both direction to 58. The Committee of the pre-graduate studies has prepared a new version of the program with 54 courses required towards the degree, but decision has not taken up to now.

Reduction of the number of repeated exams in any given course is one of the key tools of preventing the formation of a permanent, "professional" class of students.

Number of exams has increased by Ministry's Decision

The School should furthermore require that the semester grade in each course be the weighted average of the grades of the final exam, of at least one midterm, and of homework (or lab work) assigned and graded. Active participation in classes should be rewarded, and absenteeism discouraged. In particular, as is commonly understood and practiced, students should be assured by the instructor that "no question is a stupid question".

The semester grades, for most of the courses, is the weighted average of final exams, homework, labs, subjects, according to the following table:

1	Γραπτή εξέταση	69/146	47,2
2	Εργαστήρια	3/146	2
3	Θέματα / Εργασίες	4/146	2,7
4	Γραπτή εξέταση + Εργαστήρια	11/146	7,5
5	Γραπτή εξέταση + Ασκήσεις Υπολογιστικές	7/146	4,8
6	Γραπτή εξέταση + Θέματα / Εργασίες	35/146	23,9
7	Εργαστήρια + Ασκήσεις Υπολογιστικές	1/146	0,8
8	Εργαστήρια + Θέματα / Εργασίες	0	0
9	Ασκήσεις Υπολογιστικές + Θέματα / Εργασίες	1/146	0,8
10	Γραπτή εξέταση + Εργαστήρια + Ασκήσεις Υπολογιστικές	7/146	4,8
11	Γραπτή εξέταση + Εργαστήρια + Θέματα / Εργασίες	4/146	2,7
12	Γραπτή εξέταση + Ασκήσεις Υπολογιστικές + Θέματα / Εργασίες	2/146	1,4
13	Εργαστήρια + Ασκήσεις Υπολογιστικές + Θέματα / Εργασίες	0	0
14	Γραπτή εξέταση + Εργαστήρια + Ασκήσεις Υπολογιστικές + Θέματα / Εργασίες	2/146	1,4
	Σύνολο	146/146	100%

The School should provide the human resources (suitably compensated postgraduate students) for the purpose of correcting homework under the supervision of the instructor involved.

Due to lack of financial support, homework correction by graduate students is limited.

Announcement of the semester grade should be made available promptly after the final exam.

Committee of the pre-graduate studies has suggested to the personnel for prompt announcement of exam-results, which is achieved in 95%.

In the first one or two semesters, introduce suitable courses for the purpose of bridging the gap between students' High School mind framework, and the advanced and abstract thinking required at the University level.

Limited action (brief introduction to Imaginary Numbers, in Mathematics, in order to meet the needs of simultaneous courses).

Unfortunately, curriculum cuts in the High School program, (by Ministry decision) have worsen the situation.

English has become the scientific language worldwide. As in many other European countries, its use in advanced and graduate courses can facilitate the bilateral exchange of students, and enhance the possibility of turning Greece into a destination where to pursue educational and intellectual goals.

Limited action, Introduction of an Erasmus course in English. It is in the stage of approval by the School General Assembly and the Senate of NTUA. Several equivalent courses is likely to follow

Quality and Evaluation of teaching and research

[Rotate the teaching assignment of the basic courses among the teaching staff.]
The present rotation of the teaching assignment of about 50% of basic courses should be applied to as many as possible of the remaining basic courses.

Rotation has applied in most (75%) of the School courses, with the exceptions referring to courses of specialized fields. The Committee of the pre-graduate Studies of the School is working towards to optimize the rotation of the teaching assignment.

Require evaluation of every course/instructor at the end of each semester by all students enrolled in the course. For this purpose, the School should use versions of a basic questionnaire, allowing for inherent differences between theoretical and applied courses.

Minimal participation of the students to the electronic evaluation of the courses; the School, however, is considering to reactivate (in parallel to the electronic system required by ADIP) the handwritten one, from the next academic year.

The evaluations should be handled by persons other than the instructor involved, and should be kept in the School's files to be used in the periodic reviews of a faculty member. Also, copies of them should be made available to the instructors concerned, and in a concise form (such as citing the median for each question), they should be posted in the School's website.

School has decided to make available, in the School's site, the median of several questions.

In the same way that an applied course should be based on relevant theory, likewise a theoretical course should be accompanied by examples, illustrations, and applications.

Done

All instructors should supply a brief-yet, fairly complete-Syllabus for the course, providing information about the course, such as: Instructor's name, e-mail address, office hours, list of prerequisites, book(s) to be used, brief description of the material to be discussed, grading policy, etc. This could be accomplished through the "mycourse" platform, and it should be mandatory for all instructors of the School. The committee was pleased to be informed that faculty members do list translated well-known and up-to-date textbooks for their courses.

Done

Periodic review of faculty members is a critical instrument in ensuring the delivery of competent teaching and the production of research of quality. Within this framework, the concept of re-balancing teaching/research should be adopted. The law righteously requires of faculty members, both to discharge their teaching duties and also engage in research. However, it is a matter of fact that some do better than others when it comes to research. In this context, the "re-balancing" principle does make sense, and it should be applied. Assignment of increased teaching load to those faculty members ceased to produce research,

should not be looked upon as a punishment, but rather as an opportunity to contribute to the common effort by different means.

No decision, due to legal limitations.

Continue to encourage and reward excellence.

Results of excellence have been publicized in the site of the School.

The committee has already mentioned the commendable free contribution in teaching of some retired faculty members. It has also become aware that academic administrators in the School do not exercise their right to reduced teaching loads. Although this is altruistic on their part, it does fall into the hands of those who make irresponsible decisions. If required courses cannot be offered, then students would have something meaningful to strike for.

During the years 2009-2017, only few new positions have opened for the School (according to the total number of new positions given to NTUA by the Ministry).

During the last two years, the situation starts changing. The School was able to elect new qualitative members.

Regarding research, the committee wishes to reiterate its satisfaction for the high quality of research work produced by a significant number of faculty members, as evidenced by concrete data. The School should strongly encourage the rest to intensify their efforts towards improving the quality of their research.

Outreach, Technology transfer, Communication

Intensify efforts to reach, inform, and educate incoming students, High School teachers, and others concerned, about the unique flexibility and opportunities the School of EMFE provides, alone within the Greek postsecondary education framework.

Members of the School have participated in career days in several High-Schools (public and private) clarifying the profile of the School. On the other hand, the School has organized an "Open-Door" day the last two years (1200 participants during 2015-16)

Advertise success stories, such as the standing of the NTUA in international/global rankings of institutions of higher learning, awards/distinctions of faculty members, research productivity associated with quality, high profile of faculty members in international scientific activities, successful drawing of competitive research funding, successful placement of graduates of the School in respectable foreign institutions of higher learning, etc. The School has many such stories to show.

QS-2018	Physics	Natural Sciences	Mathematics	Materials
NTUA	151-200	247	251-300	251-300
AUTh	301-350	266	351-400	
NKUA	401-450	302		
UoCrete	351-400	401-450		

The School, through the NTUA, should intensify its efforts for knowledge/technology transfer, both to the public and private sector. It is unacceptable to consume with voracity products (industrial, as well as agricultural) supplied by foreigners, but be inhibited from implementing the results of our own intellectual efforts and pains. This is, clearly, the recipe for ensuring permanent backwardness for the country.

Limited but critical action towards launching a start-up company.

The concept of knowledge/technology transfer and that of service are akin to each other, but not identical; the latter is certainly useful and potentially revenue producing for the institution, but the former is of a different order of magnitude. The leadership of the institution and its subdivisions should take appropriate steps to implement/expedite knowledge/technology transfer.

Systematic collaboration of the research laboratories of the School with companies