



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

**Α.ΔΙ.Π.**

ΑΡΧΗ ΔΙΑΣΦΑΛΙΣΗΣ & ΠΙΣΤΟΠΟΙΗΣΗΣ ΤΗΣ  
ΠΟΙΟΤΗΤΑΣ  
ΣΤΗΝ ΑΝΩΤΑΤΗ ΕΚΠΑΙΔΕΥΣΗ

HELLENIC REPUBLIC

**H.Q.A.**

HELLENIC QUALITY ASSURANCE AND  
ACCREDITATION AGENCY

## **EXTERNAL EVALUATION REPORT**

DEPARTMENT OF FORESTRY & NATURAL ENVIRONMENT MANAGEMENT

TECHNOLOGICAL EDUCATIONAL INSTITUTE OF LAMIA–  
KARPENISI BRANCH

Version 2.0

April 2012

### **External Evaluation Committee**

The Committee responsible for the External Evaluation of the Department of Forestry & Natural Environment Management of the Technological Educational Institute of Lamia – Karpenisi Branch consisted of the following four (4) expert evaluators drawn from the Registry constituted by the HQAA in accordance with Law 3374/2005:

1. Professor STAVROS AVRAMIDIS (Coordinator)

University of British Columbia, Canada

2. Dr. AIKATERINI DOUNAVI

Forest Research Institute of Baden-Wuerttemberg, Germany

3. Professor YOUSRY A. EL-KASSABY

University of British Columbia, Canada

4. Dr. Andreas NTOULIS

National Agricultural Research Foundation, Greece

## ***Introduction***

The External Evaluation Committee (EEC) visited the Department between March 19-21, 2012. The group arrived in Lamia from Athens in the afternoon of the 19<sup>th</sup> and was met by the President and two Vice-Presidents of TEI Lamia, and the Head of the Department of Karpenisi branch, Assc. Prof. Anastasia Pantera. During the meeting, the TEI Lamia structure and functions were introduced followed by a discussion/clarification session that lasted about an hour. Upon completion of the meeting the EEC members were taken to the institution's main library for a short visit of the facilities. Thereafter the EEC members were driven for about an hour and a half to Karpenisi where they settled in a local hotel. Later, the EEC met with the Department Head and the Internal Evaluation Committee (IEC) members for briefing over dinner. The work dinner was conducted in an atmosphere of cordiality and hospitality where a casual discussion on issues regarding the TEI and the evaluation process took place. The group was also joined by the Deputy Regional Director and the Mayor of the city.

On the 20<sup>th</sup>, the EEC was taken to the TEI Branch of Karpenisi located within short distance from the city center. Upon arrival, the team was greeted by the Department's Head who gave a brief description of the operational protocols and departmental structure. Furthermore, the EEC confirmed the agenda for the day's visit.

Subsequently, the committee had a long meeting with the IRC members involved in the Department's internal evaluation. The meeting was conducted in a very collegiate and professional ambiance. It started with the EEC Coordinator's introduction pertaining to the purpose and objectives of the evaluation exercise and the issues that the committee needs to probe. Thereafter, the Head gave a presentation that provided an overview of the Department's scholarly activities including specific issues related to teaching, research and administrative functions such as registration and student population. The committee members asked specific questions to clarify issues related to the internal evaluation. All attendees participated in the discussion. Although informative, the committee felt that the availability of more supporting information could have assisted in providing a more complete and global image of the Department.

This initial meeting was followed by a cordial introduction to the rest of the faculty. Following that, issues related to mainly student performance, preparation and qualifications were extensively covered. Curriculum matters such as the recent conversion from a three to "a university-like" four-year program of the TEI were broadly discussed.

Subsequently, the EEC met with a group of students in the computer laboratory where a general discussion of teaching methods and their personal reflection upon pedagogical techniques took place. That meeting was followed by another with the elected student body representatives. The students were mainly from 1<sup>st</sup> and 2<sup>nd</sup> years (the Department does not have a graduate program). The meeting took place in the absence of faculty or staff members. After a brief introduction of our backgrounds and the EEC's objectives, the students introduced themselves and discussed issues related to the curriculum, training and employment opportunities after graduation. The meeting was open and frank, yet the EEC felt that students were quite exuberant but at the same time, cautious. Students did not mention much about their graduation plans since they were so early in their program. The committee noted the lack of more senior students in the group. Regardless that, the EEC also

discerned some disconnect between student aspirations and educational training.

After a lunch break, some EEC members had the opportunity to visit couple field sites where students carry out some of their laboratory training, in particular, a forest mensuration site was shown and we also observed a lab class on soil science.

The second day, the EEC did a tour of the classroom/lab facilities and talked with the faculty members on an individual basis. The EEC noted that there were some important issues related to teaching flexibility and efficiency due to financial constraints, and quality and quantity of students.

The last meeting involved the limited number of administration and technical support staff comprised by one temporary and three permanent, respectively. The main concern was the fact that there was no permanent secretariat support (the three were lab technicians), but the EEC also noted and commends their efforts to carry out double-duties to provide both technical and administrative functions.

The site visit coincided with the “Day of the Forest” workshop that took place the second day around noon-time. The EEC members had the opportunity to observe and participate in an unofficial capacity.

In conclusion, the EEC members appreciate the effort made by the Department’s faculty and staff for producing a self-evaluation document that assisted in better understanding of the issues pertaining to their operation. Faculty and staff members are very proud of the program and the facilities, while coping with challenges related to increasing enrollment that is accompanied by reductions in funding, and truly feel that this evaluation will help them to become members of an improved educational institution.

## **A. Curriculum and Teaching**

*To be filled separately for each undergraduate, graduate and doctoral programme.*

### **A1. Curriculum**

The Department is part of the Technological Educational Institute (TEI) of Lamia at Karpenisi. The Department offers a one-stream undergraduate program. There is consideration for a future post-graduate studies program that is not physically and financially feasible under the current educational framework.

The goals and objectives of the curriculum are to provide education reflecting the needs of future employers in both private and public sectors. The curriculum covers the applied and practical aspects of biological and technical training towards sustainable production and protection of natural ecosystems. The current coursework is designed to meet local needs and thus has a limited global perspective concerning environmental conservation, climate change and international forestry.

The curriculum was initially designed to meet some of the current practical and technical needs of society with emphasis on forestry aspects. According to the IRC, minimal or indirect external consultative process was implemented to develop the current curriculum. The EEC feels that adopting existing curricula from other institutions is not the proper way to differentiate and develop a unique and competitive study program. However, in practice, under existing legal, professional and personnel constraints, the independent development of the curriculum is unattainable. The current system imposes an educational structure without considering physical, geographical and resource limitations.

The curriculum was last revised two years ago. According to the IRC, the curriculum is implemented effectively, considering the imposed limitations such as number and quality of students, limited funds, top-down curriculum composition and lack of specialized instructors.

The duration of the basic studies is eight semesters including six months of practicum (practical placement). The curriculum is comprised of 39 courses of which 35 are compulsory and 8 are electives of which 4 are chosen. A graduating thesis and internship are obligatory. This is a one-stream rigid curriculum with limited alternatives. This could be improved by offering more electives within and between the TEI system. Although, the program is rather extensive and covers many aspects of forestry, the EEC noted the substantial lack of differentiation between the current curriculum and those offered in both university and TEI units thus limiting rather than promoting graduates' options. Although the Department is willing to differentiate its curriculum from others and follow new scientific trends, the EEC understands that current institutional rules prohibit that. We strongly support changes to allow such adaptations.

The committee noted the significant lack of fundamental science knowledge such as mathematics, chemistry, biology and physics that are essential at any educational level, namely, university, practical or vocational. These subjects are essential prerequisites for most of the courses offered at the current curriculum. Furthermore, we note that these program omissions are imposed by the State's limited funding and top-down curriculum development, creating an attainable situation. The current curriculum does not offer students with enough latitude to practice critical thinking such as multiple seminars and group discussions.

The EEC found no formal process to track the professional development and the careers of graduates in order to get feedback pertaining to the value of the curriculum to their professional success. A proper system must be setup in order to systematically track the alumni professional progress and benefit from their experience input and professional success. It is understood that this “tracking” is partly done by the Career Office of TEI in Lamia, however, a more direct contact with the Karpenisi alumni would surely provide a more candid feedback related to studies and employment opportunities.

The EEC noted that a major hurdle is the perpetual continuation of the student ability to take repeated examinations of one or many failed courses far and beyond the years of studies, thus resulting in a confusing and incoherent sequence of attendance. Current law changes that allow only two extra years beyond the official time length (4 years) might alleviate this situation.

Another weak point in the process is the fact that laboratory course attendance is mandatory while that of theory is not. As a result, participation rates are significantly lower at the theoretical courses with disappointing overall success rates (the percentage of passing students out of all registered equals to about 25%). The mandatory nature of laboratory courses and closer involvement of the student in the course’s learning process is reflected by the slightly better student success rates (63% out of those who have shown up in the exams as opposed to the 59% of the theoretical courses). The EEC strongly suggests merging of the two grade-wise (one mark).

The EEC noticed the lack of prerequisites such as silviculture vs. forest ecology which is a norm in many international universities and that assists in gaining the maximum knowledge of a particular course. This is a suggestion to be taken under consideration in the next curriculum revision should the future framework allows.

A significant advantage of this program is the proximity to a vast natural outdoor laboratory, namely, the forest ecosystem itself. We noticed first hand students walking to the “real” forest and carrying out on-the-spot laboratory sessions and even collecting data for their graduating thesis. This is tremendously helpful because distance, financial and weather constraints can become a prohibiting factor. This is a very positive feature and can become in the future a strong “selling” point of this program.

The academic background of students accepted in the first year is rather low both in fundamental and applied science knowledge and foreign languages. National entrance examination system changes should direct students with appropriate background to enroll in this undergraduate program. Potential students with non-natural sciences background should not be permitted to register. The aforementioned problem is directly related to the Ministry of Education ever-changing policies, total lack of Departmental autonomy and does not reflect on the decisions and efforts of the Department itself.

Overall the EEC was satisfied by the sincere effort from the Department’s members to develop a comprehensive undergraduate program under current law confusion and limited resources but emphasis should be placed into program differentiation.

## **A2. Teaching**

In general, course outlines including learning targets and expected results are presented to the students. Based on the information provided by faculty members and students, some courses are implementing modern communication tools such as power point and web-based references with follow up discussions to ensure better understanding of the concepts involved.

With regard to the practical/laboratory courses, the main teaching methods focus on applications of the theory and project assignments that are completed at home and in the field. Efforts are made to promote teamwork especially when in the field. In the EEC's view, teaching methods should be enriched with more critical thinking and problem solving so that participation in the learning process is encouraged and enhanced.

According to the internal review, the total number of permanent and sessional faculty members for 2010-2011 is 12 and 13, respectively. Considering the total number of registered students (430), the teaching staff/student ratio is 1/17 which, at first sight, is satisfactory even though in practice this number is even better, given the disappointingly low participation rates.

Means and resources currently available are close to adequate to support teaching although more important teaching aids are needed to provide the excellence in education pursued by the faculty members. The EEC believes that more funding is needed in this area. Overall though, there was a clear effort on behalf of most of the faculty members to acquire as much as possible to support teaching.

The IT infrastructure of the Department is considered to be modern and sufficient to cover its needs. The practice employed by some courses in using IT in the teaching process (i.e., electronic presentations, course announcements and specific project assignments), is to be commented and serve as a model to the rest of the courses. All faculty members should develop their own respective course websites within the Department's portal. Within each course site, the teacher would be responsible for introducing and updating the teaching material as well as providing links to relevant subject matters on the web. This would help in familiarizing students with international developments and improving their linguistic skills.

The committee noted that there is a lack of space to accommodate all students at once in some courses thus, forcing staff to run repeated sections resulting in an extensive and unnecessary work load. The EEC strongly recommends that the central TEI administration resolves this problem as soon as possible.

Examinations are mandatory for all courses. In most cases, only final examinations are arranged - this may be linked to the very low student participation rates in the classroom, i.e., small class participation hinders the option of a mid-term exam and pop-quizzes. This is an issue that deserves closer consideration possibly through the introduction of intermediate exams (pop-quizzes, mid-term), homework and other more innovative examination methods as already mentioned (i.e., group presentations).

Faculty members should make sure that graded examination papers for both theory and labs are kept for the specified period by law so that students have access to them should questions arise regarding the correctness of answers.

Regarding the linking of research with teaching, the EEC feels that this issue is not fully addressed and this is due to the selective and limited nature of faculty pursuing research. While it is claimed that students are somehow involved in limited research activities in few courses, the reality is that the link between research and teaching remains very narrow. It must be emphasized that a major weakness is the absence of any training on research experimental design and methodology early during the course of study and before the graduating report. Few basic elements of such training are offered through the course entitled “Seminar” (7<sup>th</sup> semester). It is highly recommended that a course dedicated to research design, hypothesis testing and methodology should be included in the curriculum and offered in one of the early semesters.

There is limited mobility (i.e., networking, collaborative research and conference participation) of most faculty members and practically non-existent for the students. This is attributed to the lack of funds for the faculty and poor foreign language skills on behalf of the students in case of international events. However, in the EEC’s point of view this should not serve as an excuse for not developing appropriate policy and means, especially at a time when student mobility is promoted and supported at both national and EU level (i.e., Erasmus and COST-actions).

Evaluation of teaching by students carried out by collecting questionnaires was recently introduced. According to the data provided for 2009-2010, students are satisfied in general with the quality of the teaching and courses. The EEC was informed that the results were discussed in one of the Department meetings however, no particular feedback regarding the downstream processing of the evaluation results was presented to EEC.

## **B. Research**

*For each particular matter, please distinguish between under- and post-graduate level, if necessary.*

Selective members of the Department pursue research mainly driven by personal initiative, regardless the fact, that a graduate program is non-existent. This situation is paradoxical since significant amount of emphasis is placed on research when faculty members are judged for advancement. The latter has created an environment for research pursuit regardless of the difficulties associated with funding. This is recognized and commended by the EEC.

The internal review shows that the scientific output between 2005 and 2009 averaged under one published refereed paper and under two proceeding manuscripts per faculty member per year. Detailed examination of all curriculum vitae provided to EEC during the visit revealed that between the 2005 and 2012, these numbers changed upwards slightly. This average comes with significant scientific output diversity among faculty members. The EEC commends this individual effort; however, we encourage the development of a research culture among all faculty members which will diffuse down to the student population. This could easily commence by team collaborative effort with other institutions within the region and across the world. Conference participation has resulted in good research outcomes dissemination. This effort is applauded and highly encouraged to continue in the future since conferences are considered a very important venue not only to present work, but also to network and foster new collaborations.

The EEC found that the Department lacks research space, equipment and specialized expertise to support a well-developed research program. Also, the committee noticed that although some of the labs were well equipped to carry out the teaching load, few had the level of equipment variety and sophistication to pursue advanced research especially in EU supported programs.

According to information provided from the faculty members, the Department has managed 8 competitive and 5 non-competitive research projects since 2004. The EEC considers the research success of the Department adequate especially under the transition phase that the TEI went through recently and the lack of significant equipment and infrastructure to attract research projects. However, the commitment to the creation of knowledge of some faculty members is commendable. Overall, few of the faculty members have been involved as primary and/or co-investigators. The lack of a post-graduate program is considered a strong inhibitor for further development in this area. The committee expects the faculty to become more pro-active in pursuing individually driven research or act as a team-member in large projects at national and international level.

Regardless of the research carried out, it is noted that the Department's broad visibility is quite limited and an effort should be made in this area especially with regard to the uptake of new knowledge by the pertinent stakeholders. We feel that increasing its profile, there is potential for the Department to attract high quality students in the future.

Again, it is clear that the lack of a research focused post-graduate program is a strong inhibitor to the Department's published output. Although such a program is not the panacea, the committee considers it an important element that can assist to this end. The EEC believes that if the TEI are to be considered "applied science universities", research should be an

indispensable part of teaching. This is because it promotes the introduction of students to fresh ideas, hands-on experience in the laboratory and allows the teachers/researchers to introduce new knowledge into their courses that makes learning fun and rewarding by stimulating creative thinking and problem solving ability.

Last, but not least, the EEC strongly recommends that the Department forms a standing committee to act as the liaison with the major stakeholders in the public and private sector in order to identify potential applied projects. This way, the Department will be able to attract funds with the help of the parties that will benefit by such a joint research venture. This Department is in a very advantageous position since it is located in probably one of the most productive forested area of the country.

### **C. All Other Services**

*For each particular matter, please distinguish between under- and post-graduate level, if necessary.*

It is noted that all faculty and student support services are clustered in the same building. The library is small with a limited book selection and reading space; however, through internet access it is connected to the main campus library in Lamia and through that, to journal databases and e-books.

Regarding the condition of the facilities, the EEC would like to see that appropriate budget and effort is dedicated towards maintenance and upgrading especially in the abandoned student residence area next to the main building that is in the worst shape imaginable. The EEC has been informed that relevant works might start soon however, we are concerned by that condition and unforeseen delays since that spot is also a potential health concern for the area. The effort by the students to upgrade and maintain various parts of the main facilities is commendable. The EEC was informed that the students are currently lodging in another facility close by. The Department might consider the option of converting the unsuitable dormitory space to lab and/or teaching space.

The organization, experience and the number of support staff are deemed inadequate however, good service is provided by technical staff and a part-time secretary. Still, the staff background (technicians acting like secretaries), is not appropriate to serve the students and faculty, and every effort should be made to staff the Department with at least one permanent secretary.

Internet service is reasonable, but restricted to land lines. WiFi and external access upgrading is recommended.

The quality of the Department's webpage is deemed good and easy to navigate. Furthermore, the course and laboratory (e-class) postings currently offered are satisfactory and deserve credit. However, it is highly recommended that a detailed course outline, objectives and outcomes are also posted and updated regularly. Finally, research projects should be listed. This is important in order to improve the Department's profile and thus attract more projects on a national and international level.

The EEC noticed significant voluntary student activity and participation in the upgrading of the facilities, in some athletic events and in making various "forest" based artefacts and products. Clearly, students are proud of their institution and do their best to enhance it physically. The committee would like to encourage more of such initiatives in the future and commend the student body.

Overall, administrative services and student support are deemed satisfactory under the restricted financial circumstances.

### ***D. Strategic planning, perspectives for improvement and potential inhibiting factors***

*For each particular matter, please distinguish between under- and post-graduate level, if necessary.*

The committee acknowledges the fact that the Department has produced a short strategic plan of action to improve all areas of concern. This plan was discussed and approved by all faculty members in the Department.

The plan proposes specific actions in order to take corrective measures and implement new ideas to make the experience of the students in the program more interesting and fruitful. The plan aims towards more active student participation, by providing a better learning environment through the application of advanced pedagogical methods should the funding situation and institutional framework along with the sincere participation of the faculty members allows.

Major short-term goals according to the internal review include the addressing of deficiencies in support administrative staff; improvement of the teaching facilities; active pursue of research funding; improvement of the curriculum and improvement of the Department's profile.

Major mid-term goals according to the internal report include building improvement to university "specifications"; establishment of proper research laboratories for improved market focused research activity; establishment of graduate studies and improved collaboration with similar departments at both national and international level.

The EEC was informed that the Department will have enhanced representation in the administrative council of TEI Lamia from next academic year according to the new organization scheme. The Department anticipates improved financial support, better administrative support, less bureaucracy and transparent financial sustenance of the research work. That development is deemed very positive for the future of the program.

The EEC comments the department for solidifying a plan for the near future. We understand the issues are of importance to the evolution of both undergraduate and the future post-graduate program. The EEC feels that some of the issues might be easily addressed under the new framework of TEI operation, but some others might require more effort and time to achieve especially under the current economic reality in Greece.

The development of a post-graduate program is considered by EEC a step towards the right direction assuming a significant injection of personnel and funds and the development of special foci that make this department unique compared to others. Such a program could also be developed in collaboration with the other operating forestry related TEI Departments, thus taking advantage of the expertise of each Department and using resources more effectively. Such an arrangement would also increase student and faculty mobility which is currently missing. The post-graduate program will provide the essentials to facilitate and stimulate faculty research activities and interactions within and outside the Department. The identification of specific research "niches" will create funding opportunities

both at national and international levels.

## ***E. Conclusions:***

*For each particular matter, please distinguish between under- and post-graduate level, if necessary.*

In conclusion, the overall impression of the EEC is positive regarding infrastructure, human resources and current program of studies. The EEC was impressed by the positive attitude of faculty and staff regarding future prospects of the Department. The obvious pride of the people involved about the service they offer to students is also noted and commented.

Upon further reflection and in-depth discussion among the EEC members, the following recommendations are put forward:

1. The single stream program simply copies existing Forestry curricula and does not differentiate this Department from its peers. Opportunities for change are there since the Department is located in the forest and could easily focus on the technical and practical rather than the “theoretical” aspects of forestry.
2. The current curriculum is rigid regardless the fact that it offers eight elective courses. We greatly support changes to allow the curriculum to follow new trends (i.e., conservation, climate change, carbon sequestration, forest certification, uncertainty and risk of management alternatives and international forces effects among others).
3. The curriculum lacks introductory fundamental courses such as mathematics, chemistry, biology and physics. These courses should be introduced into first year assuming that the proper resources will be available.
4. The lack of course prerequisites denies the students of curriculum logical build-up and causes academic challenges that could be easily avoided. We recommend such a “chain”-type relationship that will help in a better and easier comprehension of the material by the students.
5. The EEC observed that laboratory courses are autonomous and independent from the respective theoretical ones. As a result, students can attend and pass laboratory courses without having the required knowledge base. The EEC suggests merging of the two and the assignment of a single mark.
6. Funds should be available to hire contract instructors to teach in areas where current faculty expertise is lacking. This will be beneficial to both students’ education and faculty members’ efficient time-use.
7. The educational level of students accepted in the Department is low both in basic science knowledge and foreign languages. Potential students with a non-natural sciences background should not be permitted to register in this program.
8. The EEC observed that the availability of specialized educational software and hardware is unbalanced among the different laboratories. This is an issue that should be carefully addressed in future planning in order to ensure minimum acceptable standards throughout the unit.
9. Regarding student evaluations, consistent and persistent evaluation during the term is more effective than a single final examination.
10. The EEC found no evidence of procedures that secure a systematic updating of the

course material. Such procedures should be put in place.

11. Evaluation of faculty teaching by students should become more transparent and an effective follow-up mechanism should be in place.
12. Although the number of publications has remained constant in the past years, there is an obvious productivity discrepancy between the faculty members that needs to be addressed in the future.
13. Research under the past operational framework is deemed adequate; however, it is recommended that greater effort should be placed into furthering this endeavor at both national and international level.
14. The EEC found no formal process in place to track the professional development and the careers of its graduates in order to get feed-back pertaining to the value of the curriculum to their professional career. A proper system must be set-up in order to systematically track the career progress of the alumni.
15. While respecting the department's mission and the presented elements of a strategic plan, we feel that more emphasis should be placed to differentiate this department from others while considering social changes and perceptions regarding sustainability and conservation under present market forces.
16. The EEC is of the opinion that the presence of three TEI and two university departments are currently offering practically the same program of study. The lack of program diversity as well as the combination of declining enrolment and disappointingly poor employment prospects for graduates needs to be seriously reconsidered. A national strategic plan on future prospects and viability of several scenarios is paramount.

The Members of the Committee

**TECHNOLOGICAL EDUCATIONAL  
INSTITUTE OF LAMIA  
DEPARTMENT OF FORESTRY & NATURAL  
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