



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

HELLENIC REPUBLIC

**Α.ΔΙ.Π.**

**H.Q.A.A.**

ΑΡΧΗ ΔΙΑΣΦΑΛΙΣΗΣ ΠΟΙΟΤΗΤΑΣ

HELLENIC QUALITY ASSURANCE AGENCY

ΑΝΩΤΑΤΗΣ ΕΚΠΑΙΔΕΥΣΗΣ

FOR HIGHER EDUCATION

## **EXTERNAL EVALUATION REPORT**

**FACULTY: HEALTH AND CARE PROFESSIONS**

**DEPARTMENT: OPTICS & OPTOMETRY**

**TEI OF ATHENS**

December 2011

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### External Evaluation Committee

The Committee responsible for the External Evaluation of the Department of Optics and Optometry of the University/Technical Institution of TEI Athens, consisted of the following three (3) expert evaluators drawn from the Registry constituted by the HQAA in accordance with Law 3374/2005 :

1. Dr. Natalie Hutchings PhD MCOptom  
Associate Professor, School of Optometry University of Waterloo, Canada  
(coordinator)
2. Professor Dr. Christina N Grupcheva MD PhD FEBO FICO (Hon)  
Medical University of Varna, National Professor and Chair of Department of  
Ophthalmology and Visual Science, Associate Director, Specialised Eye Hospital  
- Varna, Bulgaria
3. Dr. Ioannis G Tranoudis DO MSc PhD FIACLE FBCLA  
Director Professional Affairs (Central Eastern Europe, Middle East & Africa),  
Johnson & Johnson Vision Care.

***N.B.*** The structure of the “Template” proposed for the External Evaluation Report mirrors the requirements of Law 3374/2005 and corresponds overall to the structure of the Internal Evaluation Report submitted by the Department.

*The length of text in each box is free. Questions included in each box are not exclusive nor should they always be answered separately; they are meant to provide a general outline of matters that should be addressed by the Committee when formulating its comments.*

## ***Introduction***

### I. The External Evaluation Procedure

- The External Evaluation Committee (EEC) consisted of:

**Dr. Natalie Hutchings** PhD MCOptom (*EEC coordinator*)

Associate Professor, School of Optometry, University of Waterloo, Canada

**Professor Dr. Christina N Grupcheva** MD PhD FEBO FICO (Hon)

Professor, Medical University of Varna, Department of Ophthalmology and Visual Science and Specialised Eye Hospital - Varna, Bulgaria

**Dr. Ioannis G Tranoudis** DO MSc PhD FIACLE FBCLA

Director of Professional Affairs (Central & Eastern Europe, Middle East & Africa), Johnson & Johnson Vision Care

The EEC carried out the on-site visit and evaluation of the Optics and Optometry Department (hereafter, 'the Department'), Faculty of Health and Caring Professions, TEI of Athens (hereafter, ATEI) between the dates of December 5-10, 2011 in Athens, Greece. The site visit took place on December 5-7, 2011.

The EEC was assembled by the Hellenic Quality Assurance Agency for Higher Education (HQAA) to evaluate the program of study offered by the department.

The EEC met with HQAA personnel for a briefing of the process, the Head of the Department of Optics & Optometry (Professor Panos Drakopoulos) and with the members of the Internal Evaluation Group (IEG), the Vice President of Academic Affairs (Ioannis Emmanuel Chalaris) who is also the president of the Standing Committee on Assessment, faculty, administrative staff, 3<sup>rd</sup> and 5<sup>th</sup> semester students, recently completed students and a student 6 months post graduation.

In the course of the evaluation, the committee examined the Internal Evaluation compiled by the department's Internal Evaluation Group (IEG.) and which included data collected in Fall & Spring semesters of 2009-2010 and the Fall semester of 2010-2011. At the time of the site visit, the EEC were briefed by the HQAA on the assessment process, and by the permanent academic staff of the Department including a general presentation of the Department, curriculum, teaching, research, technological services, administrative support and infrastructure. In addition, the committee evaluated:

- European Council of Optics & Optometry blue book
- Samples of student final semester theses
- Course textbooks written by faculty
- Samples of lecture notes and laboratory materials
- Copies of oral presentations given during the site visit
- Draft curriculum for the proposed post-graduate taught MSc program
- In addition, the EEC visited:
  - A laboratory for clinical procedures

- Laboratories for basic science (cell biology, chemistry, physics & material technology)
- The visual optics laboratory
- Classrooms where lectures are delivered
- Faculty and administration offices
- External locations: Optical Papadiamandopoulos (optical/optometric practice) and Athens Vision (ophthalmological centre) at which 6 month externships (practical experience modules) are carried out
- The library (Central library TEI Athens)
- Sports and support facilities

## II. The Internal Evaluation Procedure

The EEC examined carefully the Internal Evaluation Report (IER) before and after the site visit at the Department. The EEC feels that the documents and sources used were appropriate and that overall the IER was very well prepared. However, during the visit and discussion it became clear that some aspects were lacking or required more comprehensive information, including:

- (a) Information about eye care professions in Greece for which the program is training,
- (b) Program graduate employment opportunities and destinations of program graduates,
- (c) Information on the proposed postgraduate program (MSc) both in terms of the anticipated program of study and the resources to support the program,
- (d) Information on clinical training and assessment in the program,
- (e) Information regarding research grants received.

Overall, the IER was informative and the Department met the objectives of the internal evaluation process.

## **A. Curriculum**

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

### **APPROACH**

The Department of Optics and Optometry at TEI Athens (ATEI) is contained within the Faculty of Health and Caring Professions, and is the oldest of the two Departments of its kind in Greece. Thus, it has been primarily responsible for shaping the training program of the optician-optometrist profession in the country. The curriculum has been constructed to ensure that the graduates obtain the necessary specialized knowledge and skills required for a career in the modern science of Optics & Optometry, while anticipating and adapting to the scope of practice in the near future after graduation. On completion of the program, graduates obtain positions in the ophthalmic lens and contact lens industries, as optician-optometrists in optical stores and as associates to ophthalmologists in ophthalmic clinics.

Since the Department's inception, graduates of the program have gone on to pursue post-graduate studies at the Department of Ophthalmology, Medical School of Crete and at various international institutions. Forty-five graduates of the Department have obtained MSc degrees and 12 graduates have obtained PhD degrees.

Construction of the curriculum for professional training is dependent on the demands and scope of practice. Globally, optometry has a wide-ranging scope of practice including: refraction, spectacle lens design, dispensing and production of spectacles, contact lens fitting, assessment and management of binocular vision, assessment and management of low vision/partial sight, and detection of eye disease. Some jurisdictions allow diagnosis, management and treatment of eye disease by optometrists. The autonomous and unified profession of optician-optometrist in Greece is in relative infancy. Although official recognition of the entitlement of graduates from the Department to dispense spectacle prescriptions and fit contact lenses has been in place since 2003 (Law 971/1979, Law 3204/2003), the ban on the practice of optometry in Greece was lifted only in 2008 (Law 3661/2008) and the scope of practice for the optician-optometrist is currently being defined in conjunction with the Government Ministry of Health. It appears unlikely that the scope of practice for optician-optometrists in Greece will include treatment and management of eye disease, as access to ophthalmological care in the country is not limited. For this reason, comparison of the Department's curriculum with European training for similar scope of practice has been made in this evaluation. Comparisons with programs that train for a broader scope of practice including treatment and management of eye disease (e.g. North America) have not been made, as it is not appropriate. The Department is active in consultation with the Ministry of Health to define the future scope of practice of the optician-optometrist in Greece.

While the IER did not contain specific goals and objectives for the curriculum, it did contain a mission statement. The Department's stated desire is "To provide quality theoretical and practical training for students, in the field of Optical Technology & Advanced Optometry". The distinction between optometry and advanced optometry was not clear to the EEC. It became clear through detailed discussions that the optometric curriculum was intended to address the anticipated scope of optometric practice of the optician-optometrist role including: Symptoms & case history, objective and subjective refraction, prescribing for refractive error (spectacles); Evaluation of ocular health status (detection & monitoring of disease with referral to medical doctor when necessary), colour vision, binocular vision and visual pathways; Dispensing of spectacles; Assessment, fitting and prescribing of contact lenses; Assessment and prescribing of low vision aids; Pre- and post-operative monitoring of

patients (in conjunction with a treating ophthalmologist).

The curriculum has been divided into four streams:

- Optical Science & Technology (5 Specialty Courses)
- Optometry Science & Technology (7 Specialty Courses)
- Contact Lens Science & Technology (2 Specialty Courses)
- Ophthalmology Science & Technology (6 Specialty Courses)

**Recommendation 1:**

*The Department should construct detailed learning objectives for the separate streams of the curriculum.*

**Recommendation 2:**

*In order to effectively deliver training within the expected scope of practice, the curriculum should include practical training in the use of diagnostic pharmaceutical agents (topical anaesthetics, mydriatic eye drops and other diagnostic agents).*

The program of studies consists of eight semesters, seven of which comprise teaching in the Department and each of these semesters having five to six modules. The program includes a professional placement for two months after the 4<sup>th</sup> semester and for 6 months in the final (8<sup>th</sup>) semester (10 ECTS). During the 8<sup>th</sup> semester the students also compile a thesis dissertation (20 ECTS). Each semester is valued at 30 ECTS leading to a total for the program of 240 ECTS. In total, there are 40 modules of which 36 are compulsory and 4 are elective (total electives offered: 8). The program includes 9 courses of general infrastructure (GI), 9 courses of specific infrastructure (SP), 19 specialty courses (SC) and 4 courses of economy, administration, law and humanities (DONA). The range and depth of the studies are appropriate for the expected scope of practice encountered by graduates in the work place.

The components of the curriculum were drawn from the framework of the European Council of Optics and Optometry (ECOO) diploma. This is an appropriate standard from which to determine the requirements of the curriculum. The extent of the ECOO framework that is covered by the Department is relevant for the likely scope of practice of the students on graduation.

The Department is a full member of the Association of European Universities, Schools and Colleges of Optometry (AEUSCO) and the European Academy of Optometry & Optics (EAOO), both organisations from which guidance for the curriculum objectives were sought. The permanent faculty of the Department decide collectively on the curriculum content.

The curriculum is consistent with the overall objectives of the program of study.

The Greek member of the EEC (Dr Ioannis Tranoudis) was best able to reflect on whether the curriculum was consistent with the requirements of Greek society and felt that training for optician-optometrists in Greece has reached the required university standards to provide primary eye care services in the community. The EEC also met with the Vice President of the Panhellenic Association of Optics & Optometry (PAOO), Mr Hlias Sapounakis, who indicated that the training of the Department's students is meeting the requirements of the range of activities of the optician-optometrists in practice.

The required frequency of curriculum review, set by ATEI, is every four years but modification of some sections of the courses without changing the basic core of the program



are allowed on an ongoing basis. The current curriculum has evolved from the last mandatory review (2008) with modifications in 2010 to include a greater amount of optometric content and practical laboratories.

**Recommendation 3:**

*The EEC recommends that the Department appoint a program coordinator and that they serve as the head of the existing Curriculum Committee. A faculty member other than the head of the department should occupy this role and he/she will have responsibility for leading the strategic planning of academic curriculum as well as the day-to-day responsibility of the Undergraduate Program.*

**IMPLEMENTATION**

The Department has effectively implemented their goals in the curriculum despite severely restricted space, clinical equipment and human resources (both permanent faculty and qualified short-term laboratory instructors).

The content of the curriculum is being taught at the Bachelor of Science level. The optometric content of the program is similar to a British program of study in optometry with slightly less depth in ocular pathology, paediatric and geriatric vision care and less practical/clinical experience. However, one of the strengths of the program is the comprehensive study of optics. This is an appropriate difference in focus for the curriculum given the range of professional activities that the graduates go forward to undertake and the anticipated scope of practice in Greece.

Rightly, a considerable emphasis is placed on the practical placement in semester 8. However, there were no clear learning objectives defined for the placement. Funded by an ESPA grant, the Department has upgraded the existing log-books (in which the student records their daily activity) to include on-line update and the practical sites are visited monthly by a member of faculty to review and discuss the activities carried out with the student and placement supervisor. The updated procedure will facilitate future auditing of the extent and quality of the practical training. The absence of minimum required activities during the placement led the EEC to determine that there was currently no data available to evaluate the consistency of the practical training across all of the students. At meetings with practical placement supervisors, it was clear that they were generally satisfied with the level of skills demonstrated by the students and had employed students after graduation from the Department. It is not clear how weak students are identified, nor what mechanisms are in place to ensure that each student is reaching the expected standards.

**Recommendation 4:**

*The Department, led by the head of Department, should establish a Partner Panel for Practical Training. This should include representatives of the sites for practical training (both for the 2 month placement after semester 4 and the 6 month placement during semester 8). The Partner Panel should define clear, attainable learning objectives for the practical placements and support the curriculum development by creating more formal mechanisms of feedback (placement partner & student), including managing students who are not performing as expected. The intention of this recommendation is to improve the consistency of the practical placements by making it more structured and uniform.*

The material provided for each course is appropriate and the time offered in each course is sufficient. Optometry textbooks are primarily available only in English, and the EEC recognised the quality of the textbooks in Greek that the permanent faculty of the Department have authored.

The division of time between theoretical studies and the practical laboratories in each course is approximately 2:1. There is no opportunity for the curriculum to increase the practical laboratory time (particularly clinical optometry laboratories) due to the lack of equipment and full/part-time faculty.

Currently the Department has 501 students, with a steady tendency of accepting new students every year since 2005-2006. For the current academic year (2010-2011), the number of students per semester are as follows: 1-58, 2-57, 3-38, 4-48, 5-37, 6-46, 7 -27 and

8-38. Pre-registered students have risen again to 152.

The faculty report an increase in the number of transfers from the sister Department in Patras, adding to the administrative burden and stressing the facilities in order to implement the curriculum. For example, the two classrooms seat a maximum of 45 students despite the number of students enrolled in the semester being larger.

**Recommendation 5:**

*To allow the Department to continue to constantly improve quality teaching, ATEI should fill the vacant faculty positions as soon as possible.*

**RESULTS**

The Department reports 100% absorption of their graduates into the private sector workforce.

The EEC interviewed students at a variety of levels in the program (3<sup>rd</sup> semester, 5<sup>th</sup> semester, students just completed the 8<sup>th</sup> semester and a graduate of the program). They were universally positive and enthusiastic about their learning experiences and felt that they had practical relevance for their later profession. They were complimentary about the attitude and approach to their program displayed by the faculty, particularly the permanent faculty of the Department and the clinical contract faculty.

Currently, the Department does not audit the destination of their graduates (type of employment). A project underway by the PAOO, which is developing a database of their membership, may generate partial information in this respect. However, membership of the PAOO is not a requirement of practice as an optician-optometrist and the EEC understands that, at present, those choosing not to join the PAOO tend to be those working in a clinical association with ophthalmology.

**Recommendation 6:**

*To better inform future developments of the Department's curriculum, the Department should audit student destination after graduation.*

**IMPROVEMENT**

As mentioned above, future curriculum developments will depend somewhat on the changes that the profession of optician-optometrist. The Department is attentive to these processes and have demonstrated flexibility in responding to the training needs.

The Department has instituted anonymous student feedback on each course to enable student satisfaction with the teaching methods, content and delivery to be monitored on an ongoing basis.

The Department has successfully obtained some initial funding (ESPA) to support development of lifelong learning. They plan to implement this by provision of continuing professional development courses for optician-optometrists and seek additional funding in the future to sustain the initiative.

The Department plans an MSc program in conjunction with a university ophthalmology department. The draft program outline has been prepared, although the Department has not finalized their collaborating department. The Department plans to submit the application to the Ministry of Education in ~March 2012 with a first intake for the 2012-2013 academic year. In the current economic situation, it would be an extremely positive development for the Optics and Optometry program to be able to offer optician-optometrists the opportunity to pursue postgraduate studies within Greece. In discussions the EEC had with students in the current undergraduate program, ~50% expressed an interest in pursuing postgraduate studies in Greece if this option were available after graduation from the Optics and Optometry Undergraduate Program.

## **B. Teaching**

### **APPROACH, IMPLEMENTATION, RESULTS and IMPROVEMENT**

The principle activity of the department is teaching. The evaluation of the teaching methodology by the EEC was based on the following:

- The program of studies 2008 (revision 2010).
- The Internal Evaluation Report (2006-2010).
- Additional information from the oral presentations during the site visit of the 5-7th December 2011.
- Laboratory observation.
- Visits to an optical shop and clinical practice accommodating students for practical placements.
- Further collection of facts and figures, and discussion during the site visit.

The teaching approach of the theoretical subjects is supported by sufficient resources (i.e. projectors, notes & teaching materials) and is considered adequate by the committee. However, the committee noted an insufficiency of academic teaching staff and over-capacity use of the laboratory rooms (particularly the clinical laboratory) and classrooms.

The emphasized teaching objectives include, but are not limited to, evaluating the overall performance of students in courses, practical training and thesis. The role of the thesis (compulsory for all students) is to provide the students with self-motivation in learning and they are encouraged to develop the skills of collecting, processing, synthesizing and analyzing data, and application of critical thinking skills. The thesis is the main vehicle adopted to familiarize students with accessing current knowledge/opinion and research methods. The practical training is designed to prepare and familiarize students with the actual working conditions. So far, renewal of equipment has been achieved through national programs such as the National Strategic Reference Framework (NSRF).

There is a desire of the faculty (permanent & contract) to be involved in research that supports teaching and to develop high quality research at ATEI, including by collaboration with other institutions.

The department currently has 4 permanent faculty (3 optician-optometrists & 1 physicist). The permanent faculty had also included an ophthalmologist who retired recently and whose post is currently unoccupied. Three of the four permanent faculty have a teaching load of 14-16 hours per week, a load that the EEC considers high. The balance of teaching in the curriculum is delivered by faculty from other departments (4 MDs, 1 Biologist, 3 Physicists, 1 Mathematician, 2 Chemists, 1 Economist, 1 English professor) and short-term contract staff of the Department (1 ophthalmologist, 6 optician-optometrists, 3 physicists, 1 computer scientist, 1 psychologist).

Currently, the department has 501 student enrolments in the 7 semesters, therefore in each semester there are up to 60 students. The permanent faculty provide a total of 64 hours of teaching per week (27%). The total number of teaching hours in the program is 174, 48% of which are provided by short-term contract staff and the remaining 25% by teaching staff and faculty from other departments at ATEI. The ratio of teachers / learners in courses is currently at its highest level as a consequence of high enrolments. The committee noted that the number of short-term contract staff is high relative to the permanent faculty. It also noted that the temporary staff reviewed during the site visit was well qualified and motivated, and they received excellent feedback from their students and colleagues.

The department has diverse teaching facilities and shares some of their laboratory space with other departments in the Faculty. Some of the laboratories are equipped with very interesting demonstrative models, which makes practical teaching interactive and effective. However, these are related mainly to the basic sciences. The contemporary eye testing equipment is lacking in number for the size of the student enrolment. High technology devices are common in optometric practice and these are largely unavailable for teaching

purposes on-site at the Department.

The classrooms of the Department of Optics & Optometry are on the first floor of the building of the Faculty of Health & Caring Professions and consist of two classrooms with a seating capacity of 45. According to the timetable of semesters, there are a total of 114 hours per week spent teaching theory in these classrooms and, therefore, the degree of use of rooms is 57 hours per week (~11.4 hours per day per room). The committee feels the classrooms are of inadequate size for the student enrolment.

**Recommendation 7:**

*The Department/ATEI should seek ways to resolve the inadequate level of seating available to the program.*

The 4 laboratories of the Department are located on the first floor of the Faculty of Health & Caring Professions and consist of: Dispensing Ophthalmic Lenses, Clinical Optometry and Refraction, Contact Lenses and Optical Instruments. To optimize the use of space the laboratories are set up with a series of workstations. According to the timetable analysis of semesters there are a total of 60 hours laboratory instruction per week (~12 hours per day per lab). The students are assigned to laboratory sessions in rotation, in 3 groups of ~24 students. Recent reductions in the hours of short-term contract staff has led to amalgamating laboratories, increasing the group size to an average of 28 students per laboratory session, with some above 35 students. The EEC believes that this change is not beneficial for the quality of teaching in the course.

**Recommendation 8:**

*In order to maintain the teaching quality the staffing levels in the laboratories, primarily the clinical laboratories, should be reviewed. A more typical staff:student teaching ratio for clinical techniques is 1:6 or 1:8.*

Students of the Department are required to undertake eight (8) months of practical placement during their program of study. These take place in two periods: two months between the 4<sup>th</sup> and 5<sup>th</sup> semester (July & August) and six months in the 8<sup>th</sup> semester (1 April to 31 September or 1 October to 31 March). The practical placements require 48 hours per week, leading to a total of 1,536 hours of practical placement on completion of the program. Prerequisite for entry to the placement semester is successful completion of the specialty courses of the curriculum. Also, internships outside of Greece are allowed and students have taken their placement semester in European Community countries. These have been supported by external programs (e.g. Erasmus) and relationships forged with other institutions (e.g. Oulu Uni. Finland). Placements in Greece occur exclusively in the private sector because the role of optician – optometrist is not allowed in public hospitals until the law regulates the profession.

**Recommendation 9:**

*When the profession achieves regulation in law, the Department should pursue placement opportunities for students in the public sector.*

Collaboration between faculty and students appears to be very good. Teachers have office hours to work with students, which are advertised via the Department notice board and/or on the course website. Some teaching staff are also contactable by e-mail. Students appear to be happy with the working system and declare that they have sufficient level of communication with the teaching staff.

The methods of teaching used include lectures (with digital projection), tutorials, practical (laboratory) sessions, consultations, self-reading, using internet resources, practical experience “in the field”, thesis preparation. The methodology is clear and is reasonably implemented throughout the curriculum.

The EEC was impressed by the number and quality of teaching materials prepared by the faculty and teaching staff, including 8 textbooks and handouts for every course. All the textbooks are recently published and are tailored to the program. Some of the textbooks are brilliantly illustrated. The department has plans for internet-based resources incorporating

more interaction with the material. The teaching materials are of high standard and fulfill the needs of the curriculum.

The assessment system follows National and TEI standards, and draw from a variety of methods including: oral examinations, long-form written examinations, multiple choice examinations, laboratory reports, practical skill assessments, and thesis. The academic staff are familiar with the rules and knowledgeable in the preparation and evaluation of examination performance. The final examination is the primary method of assessment both in the theoretical and laboratory courses and they take place at the end of the relevant semester. At the beginning of September each year, there are two weeks assigned for remediation of failed examinations of the Fall and Spring semesters. Transparency of the evaluations is ensured by the supervision of students during examinations (at least 2 supervisors are present for each course). The lack of space in the classrooms has required an increase in the administrative preparation for the examinations (i.e. multiple versions of the examination paper, so that the examination integrity is not compromised by the students sitting adjacent to each other).

The quantity of teaching is high, and is of high quality. In general, there appeared to be good harmonization between the theoretical and practical material, which is very beneficial for the students.

The permanent faculty are reflective about their teaching and they have clear plans for the future, which include:

- Improvement of the clinical teaching and running an on-site clinic with real patients,
- Developing a postgraduate program,
- Developing nation-wide program for continuous education in optometry,
- Collaboration with other Universities in Europe.

**Recommendation 10:**

*The Department/ATEI needs to expand the clinical laboratory facilities. At least two more laboratories for refraction and contact lenses are needed.*

**Recommendation 11:**

*It would be beneficial for the Department to have an on-site clinic where students in the 6<sup>th</sup> and 7<sup>th</sup> semesters could have opportunity to provide supervised eye care prior to their 6 month placement. The EEC was unable to identify comparative optics and optometry institutions in Europe that did not provide this kind of educational experience.*

**See also Recommendations #5 & #8**

### **C. Research**

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

#### **APPROACH, IMPLEMENTATION, RESULTS and IMPROVEMENT**

Due to the limited number of staff, overload with teaching and demand for preparation of teaching materials the research in the department is currently limited, despite the members of the department being well established and experienced researchers. The EEC recognizes that the situation is complicated by the current economic and political climate in Greece. However, the EEC felt that the limitations on research activity of the few permanent faculty members (imposed by the heavy teaching load) severely restricts their potential for mobility to other academic institutes and severely limits their career progression.

From the four members of the permanent faculty, 3 have a PhD and all of the postgraduate degrees have been acquired in the UK. The Department has not yet had a PhD student, primarily due to the TEI institutional requirement that PhD supervision be undertaken with the collaboration of a university. Although the Department has been active in trying to set-up such collaborations, with their permanent faculty holding a primary supervisory role, none have yet been implemented. It should be noted however, that permanent faculty currently participate as members of PhD advisory committees at other institutions.

Regardless of these obstacles, the Department undertook a research project "Thalis" 2009-2011 to evaluate ophthalmic lenses and sunglasses in Greece. Students from the Department actively participated in this project. A research project for depositions in monthly contact lenses is currently in progress, funded by industrial support. Also a general statistical description of the use of contact lenses in Greece has been developed in the last 4 years. In 2007 the Department also ran an evaluation of accommodation in two populations. In addition, the Department has developed expertise in marine optics with instrument development and optical measurement projects funded by the EU and the Greek government. Much of the current research activity in the Department is carried out in conjunction with Undergraduate students, primarily those who choose a research project as their thesis topic. The EEC felt that the involvement of Undergraduates in the Department's research efforts was a positive aspect of the Undergraduate Program but recognizes that their participation is limited by the time-demands of the studies. As there are no postgraduates, personnel for pursuing research initiatives are otherwise severely limited.

The emphasis of scholarly activity has been clearly placed on preparing and publishing textbooks in order to facilitate the education in the Undergraduate Program. There are 3 research projects currently active in the Department and four proposals, in which the Department are participants, currently under review. Research productivity by the Department, as assessed by dissemination of the results, is reasonable given the limited amount of time that the permanent faculty can devote to research activities (28 articles in journals or conference proceedings; 9 abstracts/announcements). The quality and recognition of the research produced was assessed by review of the number of citations to published work. According to census reports the total amount of citations in the last five years is 208, with 43 for year 2010, which indicates topical, quality publications. The EEC felt the Departmental effort to regularly contribute articles to the PAOO publication was especially important to foster links with the profession and provide up-to-date information to the profession.

In addition to the personnel issues, the available research infrastructure (laboratory space and equipment) is, unfortunately, also not sufficient. The basic equipment of the Department

supports the Undergraduate Program. In the last three years some new equipment has been added that may be available for research (e.g. a refractometer, a perimeter, a topographer, a spectrometer, standard calibration sources and an oscilloscope), even though it is intended primarily for educational purposes.

The Department and the permanent staff have a clear research vision but, due to the aforementioned obstacles, research is not currently the leading activity. However, the permanent faculty has research plans for the next few years including the development of postgraduate studies and collaborative research projects with the Department of Optometry, University of Manchester Institute of Science & Technology, the University of Athens, the University of Aegean and the contact lens industry.

**Recommendation 12:**

*The Department needs to continue pursuing PhD position(s) in the Department, initially in collaboration with other units.*

**Recommendation 13:**

*The head of the Department should draft and implement a clear strategic director for research development in the Department with emphasis on individual, achievable research goals for the permanent faculty.*

## **D. All Other Services**

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

### **APPROACH, IMPLEMENTATION, RESULTS and IMPROVEMENTS**

The provision of Departmental services supporting teaching and research activities is conditioned by the structure of the Department, i.e., the high ratio of temporary to permanent staff and its structure as a non-autonomous Department. These services include Information Technology (IT) support, administrative support, laboratory technical support, and teaching and research infrastructure. Most appear to be provided centrally by ATEI.

Administrative support is provided by an efficient Departmental secretariat in conjunction with information and procedures described on the Web. The students did not raise complaints about the administrative services. The Departmental secretariat is responsible for a variety of services, including updating notices on the website for student attention. They also administer the practical placements in conjunction with the permanent faculty. A considerable amount of time appears to be spent orientating the students to accessing the ATEI student information services. The administrative staff did raise that in peak periods they had difficulty completing their tasks in the working day, staying late or working from home to ensure that this did not impact the students severely. They felt that this was a consequence of a retired staff member not being replaced. They also report that they are lacking in space, with much of their archive material being stored in cupboard space in the Departmental practical laboratory. The Department was aware of these difficulties and also noted this in their IER.

#### **Recommendation 14:**

*The Department should consider short practical training sessions with the students for accessing their student information in order to relieve pressure on the administration staff.*

All of the students interviewed were satisfied with their access to appropriate study space, amenities and services, and they felt that they were appropriately represented when issues arise.

Student participation in mobility programs (e.g. ERASMUS) was active and the students were knowledgeable of this as an option. Upper semester students expressed a desire for closer links with the professional association and, although student membership of the PAOO is possible, few of the students were aware of it.

#### **Recommendation 15:**

*The Department should more actively promote student links with the PAOO.*

The Department uses the central ATEI library that serves the whole Institute. The library was functional and had adequate IT support. The numbers of specialist optometry and ophthalmology textbooks, outside of those the students are given in the program, were reasonable. The library is moving towards electronic resources as a more cost-effective delivery of these materials. In addition, there is a budget freeze on new textbooks, so it is unlikely that the collection will increase greatly in the next few years. Access to the medical and health literature, a crucial aspect in resourcing evidence for healthcare, is obtained via ScienceDirect.



**Collaboration with social, cultural and production organizations**

The Department's primary collaborative initiatives are with professional organizations and manufacturing industry. The students also take part in screening children's vision in the 7<sup>th</sup> semester. In addition to the curriculum/teaching benefits described earlier, the establishment of an on-site clinic would allow the Department to have plentiful opportunities for provision of eye care services for ATEI students and employees, and for the local community.

### ***E. Strategic Planning, Perspectives for Improvement and Dealing with Potential Inhibiting Factors***

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

Optometry is a bridging specialty between optical business and ophthalmology. It is a cost-efficient way to provide wider access to vision care in the community. Optics and optometry is a relatively new academic subject and profession in Greece. There is a wide diversity of the scope of teaching training and practice across Europe and internationally, but the permanent members of the staff of Department of Optics and Optometry have developed a flexible, up to date, nationally relevant program that allows effective training of skilled optician-optometrists.

The Department of Optics & Optometry is one of the most popular departments of the Faculty of Health and Caring Professions at ATEI and the graduates have 100% absorption into the private labour market.

There are two Departments that train optician-optometrists in Greece, the Department of Optics & Optometry, Faculty of Health & Caring Professions, TEI of Athens, and the Department of Optometry & Vision Studies, Faculty of Sciences of Health & Care, TEI of Patras. The latter Department is a recent addition (2007) to the Greek higher education structure and it is anticipated that it will graduate its first students in June 2012.

#### **Short-, Medium- & Long-term Goals Identified by the Department**

##### ***Short-term Goals (next 2 years):***

- Refine curriculum based upon outcome of legislative changes.
- Consolidate planning and partner institution for the proposed MSc program.
- Apply for approval of MSc program.
- Develop continuing education courses for optician-optometrists.

##### ***Medium-term Goals (next 4 years):***

- Establish an on-site clinic for clinical training.
- Develop a cohesive research program by permanent faculty.
- Develop partnerships with other institutions for PhD program.

##### ***Long-term Goals (5+ years):***

- Develop independent (i.e. internal to Optics & Optometry) MSc/PhD programs.
- Enhance research profile internationally.

#### **Potential Inhibiting Factors at State, Institutional & Department Level**

Among the potential inhibiting factors for the Departments goals are: the regulation of the profession is still being defined (at the State level); inactivity in the hiring of additional permanent faculty and cuts in short-term contract faculty hours (at the State/Institutional level); and a lack of space and an on-site training clinic (at the Institutional/Department level).

#### **(a) Curriculum**

The Department at ATEI has been delivering optometric training since 1994 and was formally recognized as an optometry training unit with its name change to Optics & Optometry in 2006. The curriculum has undergone constant review and renewal between 2006-2010, primarily increasing the amount of optometric content. Students graduating from the program obtain a non-transferrable license to practice as an optician-optometrist. In many European & international jurisdictions, competency for licensure is examined by an

external regulatory council (such as a College of Optometrists). As this is not the case in Greece, the task of assessing competency falls on the Department. It is, therefore, crucial that the Department construct their curriculum on the foundation of competencies describing the skills acquired by their graduates on completion of the undergraduate program; further, each competency should be described by the learning objectives and activities of the program that are to be completed for it. **[Recommendations 1 & 4]** This will help the Department identify gaps and redundancies in future curriculum reviews, and effectively plan modules for the proposed MSc and continuing education programs. **[Short-term goals; Recommendations 2, 3, 4, 6]** In addition, it will help the Department plan for adjustments in clinical training if the issues arising from a lack of clinical laboratory space, a lack of an on-site teaching clinic and the limited amount of equipment/personnel are resolved. **[Long-term Goals; Recommendations 5, 8, 10, 11]**

### **(b) Teaching**

Due to increased life expectancy the need for optician-optometrists is going to increase in the next 10 years. Providing quality, relevant education will have a huge benefit and social impact. However, the learning objectives and teaching should be reach the standards set out by European guidelines.

The EEC found the student attendance and the actual number of students taking examinations at the end of each semester and their performance to be of good standard, despite the lack of space. **[Recommendations 7, 10]** This is associated with a well-prepared curriculum and the dedicated teaching that the permanent faculty and visiting staff are providing. However, during conversations with the students and interviews with the practical placement partners, the EEC received some comments on insufficient practical skills. This appears to be a result of practical training limitations due to over-crowded laboratories, under-staffing in laboratories and non-existent optical instruments that are present in real clinical practice. **[Long-term Goals; Recommendations 5, 8, 10, 11]** The Department should develop a plan for expanding not only the number of the rooms but also the scope of ophthalmic diagnostic equipment in order to ensure practical training of high standard. For example they need at least one more video-slit-lamp, one more phoropter (preferably automatic), wave-front analyzer, modern topographer and others.

The program includes only one semester of foreign language training and the English demonstrated by some students was at a medium level. Considering that much of the optometry/ophthalmology resource material (textbooks, research articles, internet tools, conferences etc.) are in English, more English language training should be considered. This is an important issue, as it will also facilitate the mobility of students to other EU Universities, which is a very positive measure for the integration of Greek graduate students in the EU system, and better prepare them for life-long learning after graduation.

The number of the permanent academics is insufficient and has led to overload with teaching and limited time for administration and practically eliminates any research activities. The visiting staff has limited time to devote to the Department and the permanent staff must cover all unusual hours. This could be improved by opening the pre-existing permanent faculty positions and, eventually, developing more, new permanent positions. This must be a priority for the institution and the Department, as the permanent faculty currently appears to be working at the edge of their capacity. **[Recommendations 5, 8]**

Regarding the temporary staff, there must be opportunity for academic development. Currently, most have Master's degrees from abroad, but some might consider higher

education within the Department if such an option exists. Developing postgraduate studies as part of the Departments strategic plan for research must be priority not only because improvement of the education is needed, but also because the postgraduate students may facilitate laboratory teaching sessions and that will increase the number of instructors per number of students. In addition, it will secure the long-term health of optician-optometrist training in Greece. **[Medium & Long-term Goals; Recommendations 8, 13, 14]**

For improvement in the amount and quality of the clinical teaching and after extensive discussions with the academic staff, the EEC strongly recommends development of an on-site clinic at ATEI for patient examination. This will prepare students for their practical placements and practice after graduation, and provide them with an opportunity to develop there skills (under supervision) for dealing with more diverse eye problems and populations of patients than they currently encounter in the clinical laboratory sessions. This model of training is typical in medical and optometry schools. However, this enterprise will require significant support from the institution and additional administrative support, space and equipment. **[Long-term Goals; Recommendation 11]** In lieu of an on-site clinic, the committee recommends pursuing opportunities for practical training in public sector hospitals. **[Recommendation 9]**

### **(c) Research**

Research activity is very important for permanent and temporary staff affecting directly their professional and academic career advancement. It is emphasized again that the EEC considers the teaching load as high and incompatible with the pursuit of a competitive research activity of high quality. Since the number of permanent staff is low, the accomplishment of this task is very difficult and depends to a large degree on their good will and tenacity. Nevertheless, the level of funding and participation in research programmes related to the Department and the quality of research of its members are considered very satisfactory given the size of the Department. The committee recommends that the Department develop a strategic research plan that optimises the forward progress of their research and that consideration of research activity be taken into account with any new permanent faculty hires.

The committee strongly suggests the undertaking of appropriate measures to reduce the teaching load depending on available sources. Also it will be important to provide more equipment for clinical research in order to pursue research projects.

The committee discussed the development of a postgraduate programme (MSc and PhD levels) in detail with permanent faculty members of the Department. The committee strongly supports the ambitions of the Department for an MSc programme. The success of this programme should require also support for administrative and additional resources, including space, equipment, and IT facilities and software. **[Short-, Medium- & Long-term Goals; Recommendations 13, 14]**

### **(d) Other**

For the most part, student life and services at the Department are well organised and run reasonably. There are noted stresses on the administrative secretariat at peak periods. **[Recommendation 14]**

Although there are clear links between the faculty and the professional body representing optician-optometrists (PAOO), the committee suggests that this relationship be more actively cultivated between the students and the PAOO. **[Recommendation 15]** This is important for the development of a cohesive, representative organization in the development

of the profession of optician-optometrist in Greece.

## ***F. Final Conclusions and recommendations of the EEC***

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

The Department of Optics and Optometry at TEI of Athens (ATEI) is contained within the Faculty of Health and Caring Professions, and is the oldest of its kind in Greece. Thus, it has been primarily responsible for shaping the training program of the optician-optometrist profession in the country. The Department currently provides only an undergraduate program of study, in which 501 students are enrolled. The Department has four full time academic personnel. The head of the Department is a full professor in physics, there are two Assistant Professors (optometry & vision science) and one lecturer (optometry & vision science). There are number of faculty and staff from other ATEI departments that provide the relevant expertise for delivery of the Undergraduate Program, primarily in the early semester, basic science components. All members of the teaching staff hold postgraduate degrees, however, exclusively completed abroad. Only 2 staff members provide the administrative support, and it is likely the Department will need additional secretarial personnel to relieve some of the administrative burden on the faculty and support the Department's ambitious plans for development. The Department at present does not have a postgraduate program, however, a draft framework for such a program (in partnership with a university) has been prepared and there are plans to seek approval for this program in the very near future .

The main conclusions regarding the necessary steps and decisions to be taken for improving the development of the Department in order to fulfil the targets of its existence are as follows:

- (a) Within the next four (4) years the academic personnel should be increased in number and the current vacant academic positions should be filled. Existing permanent academic staff in the Department should work to cover the promotion criteria and goals for Associate or Full Professor positions – with the support of a cohesive direction of research in the Department. Visiting academic staff should be given options for postgraduate studies.
- (b) In order to provide quality education the department needs more clinical teaching and laboratory space. Financial resources for upgrading clinical instrumentation should be identified. The department will need to facilitate at least one clinical laboratory for examination of teaching patients under supervision. These are essential for improving the quality of clinical education.
- (c) The current curriculum is excellent for the level of bachelor's education (level 6 EQF). However, the Department must develop and facilitate postgraduate studies at the level of MSc and PhD. For such a process Department will need full support from ATEI.
- (d) Within the next 4 (four) years the department must concentrate on research, as currently the research activities are limited. Continuing to include the undergraduate students in this process and developing involvement of postgraduate students is crucial to the success of any planned research programs.

All good practices and weaknesses of the Department's activities (teaching and research) and several recommendations to be considered have been explicitly provided in the relevant sections of this report.

### ***(i) The Department's readiness and capability to change/improve***

The Department has demonstrated its readiness and capability to change and improve; they recognized the need to improve and it has taken numerous, appropriate initiatives to do so and have modified the curriculum to recognized European standards. Also, actions are already in progress to develop postgraduate training (MSc program) and continuing professional education for the profession. The EEC was impressed by the number of books of a very high standard produced for the last four years to facilitate the education. The permanent academic staff are very enthusiastic, open to internet technology and its

implementation in teaching. The EEC strongly supports the plans for developing an on-site clinic for training opportunities with real patients, as this is the practice in most of the established optometry educational centres in Europe and internationally.

***(ii) The Department's quality assurance***

The Department's quality assurance processes need some improvement. A structured series of activities and learning objectives would help them be sure that the curriculum is meeting the intended goals of the program; the continuation of the student questionnaires (initiated by the HQAA evaluation process) is an excellent development; clear objectives for the practical placement are critical and the Department needs to strive for a consistent student learning experience as far as possible. The specific recommendations are made in the relevant sections above. The Committee believes that these should be considered not only by the Department staff but also by the ATEI management.

**Even accounting for the recommendations, the EEC is satisfied with the current quality of the Undergraduate Program and believes that the standard of education provided by the Department of Optics and Optometry at TEI of Athens is equivalent to Level 6 within the European Quality Framework.**

The Members of the Committee

Name and Surname	Signature
1.	_____
2.	_____
3.	_____
4.	_____
5.	_____