



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 RADIOLOGY
(MEDICAL RADIOLOGICAL TECHNOLOGISTS)

TEI OF ATHENS

Version 1.0

TABLE OF CONTENTS

The External Evaluation Committee

Introduction

I. The External Evaluation Procedure

- Brief account of documents examined, of the Site Visit, meetings and facilities visited.

II. The Internal Evaluation Procedure

- Comments on the quality and completeness of the documentation provided and on the overall acceptance of and participation in the Quality Assurance procedures by the Department .

A. Curriculum

APPROACH

- Goals and objectives of the Curriculum, structure and content, intended learning outcomes.

IMPLEMENTATION

- Rationality, functionality, effectiveness of the Curriculum.

RESULTS

- Maximizing success and dealing with potential inhibiting factors.

IMPROVEMENT

- Planned improvements.

B. Teaching

APPROACH:

- Pedagogic policy and methodology, means and resources.

IMPLEMENTATION

- Quality and evaluation of teaching procedures, teaching materials and resources, mobility.

RESULTS

- Efficacy of teaching, understanding of positive or negative results.

IMPROVEMENT

- Proposed methods for improvement.

C. Research

APPROACH

- Research policy and main objectives.

IMPLEMENTATION

- Research promotion and assessment, quality of support and infrastructure.

RESULTS

- Research projects and collaborations, scientific publications and applied results.

IMPROVEMENT

- Proposed initiatives aiming at improvement.

D. All Other Services

APPROACH

- Quality and effectiveness of services provided by the Department.

IMPLEMENTATION

- Organization and infrastructure of the Department's administration (e.g. secretariat of the Department).

RESULTS

- Adequateness and functionality of administrative and other services.

IMPROVEMENTS

- Proposed initiatives aiming at improvement.

Collaboration with social, cultural and production organizations**E. Strategic Planning, Perspectives for Improvement and Dealing with Potential Inhibiting Factors**

- Short-, medium- and long-term goals and plans of action proposed by the Department.

F. Final Conclusions and recommendations of the EEC on:

- The development and present situation of the Department, good practices and weaknesses identified through the External Evaluation process, recommendations for improvement.

External Evaluation Committee

The Committee responsible for the External Evaluation of the Department of Radiologic Technologists of the Technical Institution of Athens consisted of the following five (5) expert evaluators drawn from the Registry constituted by the HQA in accordance with Law 3374/2005 :

1. Dr Theodoros Arvanitis (President)

(Title) (Name and Surname)

School of Electronic, Electrical & Computer Engineering, College of Engineering and Physical Sciences, University of Birmingham, Birmingham, United Kingdom

(Institution of origin)

2. Professor Vasilios Baltzopoulos

(Title) (Name and Surname)

Centre for Sports Medicine and Human Performance, Brunel University, London, United Kingdom

(Institution of origin)

3. Dr. Jaap Kuyvenhoven

(Title) (Name and Surname)

Department of Nuclear Medicine, Hospital Gelderse Vallei Ede, The Netherlands

(Institution of origin)

4. Dr Spyros Manolopoulos

(Title) (Name and Surname)

University Hospitals Birmingham NHS Foundation Trust Queen Elizabeth Hospital, Queen Elizabeth Medical Centre, Birmingham, United Kingdom

(Institution of origin)

5. Professor Emeritus Dimitrios Spigos

(Title) (Name and Surname)

The Ohio State University, Columbus, Ohio, U.S.A.

(Institution of origin)

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

- Dates and brief account of the site visit.
- Whom did the Committee meet?
- List of Reports, documents, other data examined by the Committee.
- Groups of teaching and administrative staff and students interviewed
- Facilities visited by the External Evaluation Committee.

The External Evaluation Committee (EEC) met at the HQA offices on Monday 9 October and its members were briefed by the HQA vice president and other members of staff. Following a presentation overview of the procedures and expectations of the external evaluation process, the committee members discussed various organizational issues and clarified the details of the visit with the HQA officials and staff. They were then met by the Head of the Department of Medical Radiologic Technologists and transferred to the facilities of the Department at the Technical Institute of Athens, in Aigaleo district of the city.

The EEC was met by a Committee of senior staff of the TEI including the President and Vice President of the TEI, and other senior members of the Institute and the Department with responsibility for the internal and external evaluation processes. The Committee members were given a brief overview of the history and recent developments of the TEI, which was very informative and helpful. The visit then continued with an introductory meeting of the EEC with the Head of Department and section heads and following a brief tour of the Departmental facilities, there was a detailed presentation of the internal evaluation process and report findings by the Departmental internal evaluation team. This allowed the EEC to ask questions and clarify various issues relating to the detailed and extensive internal evaluation report that the EEC received approximately two weeks before the visit.

The following day (Tuesday 11 October), the EEC visited the laboratory facilities of the Department. The committee had the opportunity to discuss various issues relating to the lab facilities and training of the students, with members of the faculty. The EEC then met with the Department’s two members of the administrative support team and discussed in detail the administrative support issues for staff and students. This was followed by a meeting with a group of twelve undergraduate students and, after lunch, another meeting with a group of ten graduates of the Department, ranging from recent graduates to experienced technologists that graduated several years ago. The EEC then examined various documents, reports, books and lecture notes by members of staff, reviewed examination scripts and laboratory reports and a selection of recent and older final year dissertations.

During final day of the evaluation visit (Wednesday 12 October), two different groups of the EEC visited two of the hospitals where the students are doing their practical training (Evangelismos and Atticon Hospitals). This included meetings and inspections in different Departments of the hospitals, where the students are trained. These included the Departments of radiology, MRI and CT, ultrasonography and nuclear medicine. The EEC had various meetings and discussions with clinicians, and radiology technologists that are

responsible for the training of the students at these clinical facilities. The EEC group members also had the opportunity to meet and talk with some students of the Department that were undertaking their hospital training during the visits. The EEC members were then met back at the Department in Aigaleo, and following lunch, they had the opportunity to visit the other facilities of the Institute including the library and various student services facilities. Following a private meeting of the EEC, the visit to the Department was concluded with an exit meeting with the internal evaluation committee, Head of Department and other members of staff for a debrief of the main conclusions of the EEC. The external evaluation report was then prepared by the EEC over the next two days (Thursday 13 and Friday 14 October) in Athens.

During the external evaluation visit the EEC met with the HQA officers and staff, senior management of the TEI of Athens, the Head of the Department, academic staff, administrative and support staff, existing students and graduates of the Department of Medical Radiologic Technologists, as well as, clinicians, radiologists and radiologic technologists in local hospitals.

The EEC examined a number of documents and data in the process of external evaluation, including the internal evaluation report, associated appendices with detailed data and metrics, the copies of the presentations by members of the internal evaluation committee, samples of project work and dissertations, samples of marked exam scripts and laboratory practical reports and tests, student evaluations, clinical placement assessment documents, various institution reports and newsletters, guides for students and relevant information included in the Departmental website.

II. The Internal Evaluation Procedure

Please comment on:

- *Appropriateness of sources and documentation used*
- *Quality and completeness of evidence reviewed and provided*
- *To what extent have the objectives of the internal evaluation process been met by the Department?*

The internal evaluation procedure was coordinated by the internal evaluation committee (OMEA) with the support and cooperation of all members of academic and administrative staff that were appointed to a number of specialist committees to provide the necessary input (curriculum, teaching, research, cooperation with external bodies, strategic development, administrative services and facilities, table production and improvement plan committees). The main sources and documentation used in the preparation of the internal evaluation report included the official records of the Department, the minutes of the general assembly meetings, records of courses, student personal records, student evaluation records and reports and marking and examination records. The process started in the spring of 2008 and there were several meetings of the OMEA team with members of staff and students to explain the procedures and prepare the necessary documentation and the data that was collected and analysed using Excel. The team reported that it was a long and complicated process, which involved a lot of effort to extract and combine the data from a number of different sources. However the evidence examined and the process followed was appropriate for this first attempt of evaluation and the internal evaluation report (IER) produced was extensive, very detailed and well documented. On some important issues the report tended to present the problems mainly without any clear strategic directions or appropriate proposals for action but, overall, the objectives of the internal evaluation process have been fully met by the Department.

A. Curriculum

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

APPROACH

- *What are the goals and objectives of the Curriculum? What is the plan for achieving them?*

The goals and objectives of the Curriculum for the Department of Medical Radiological Technologists of TEI Athens have been clearly stated in the IER and are identified as follows:

1. The curriculum and the programme of study should equip the student with the practical skills and in depth knowledge of Radiological Technology (RT), in order to fulfil the modern needs of the profession.
 2. The curriculum should equip the student with flexibility in skills and knowledge to adapt to new technologies.
 3. The curriculum covers the three main domains of RT, namely diagnostic radiology, radiotherapy and nuclear medicine, including the overarching themes of quality control, safety, radiation physics and radiation protection.
 4. The curriculum effectively combines theoretical and practical teaching, including clinical experience in local hospitals, covering all three main domains and associated themes, as described in point 3.
 5. The curriculum has been designed by using the European Credit Transfer and Accumulation System (ECTS), which has been adopted across EU countries and conforms to the Bologna Accord (1999). This has allowed the efficient organisation of educational units and learnable objectives of the RT subject matter, while it has standardised the offered degree to a common credit and accumulation system across the EU, establishing EU recognition of the degree.
- *How were the objectives decided? Which factors were taken into account? Were they set against appropriate standards? Did the unit consult other stakeholders?*

The curriculum objectives were carefully considered and chosen by taking into consideration the following three factors:

1. The alignment of the organisation of the degree to the ECTS system and the Bologna Accord requirements for standardisation across Europe.
2. The alignment of the content of the curriculum to the European (Higher Education Network for Radiography in Europe-HENRE objectives) and International (International Society of Radiographers & Radiological Technologists-ISRRT educational guidelines) educational RT training standards. This has taken into consideration the constraints of the Greek legislation for the TEI individual subject area curriculum development.
3. The alignment of the content of the degree to cover the needs of an undergraduate university-based level education for the field of RT.

The curriculum has taken into consideration the requirements of the Greek Atomic Energy Commission (GAEC). The content has also been compared and enriched by examples of equivalent curricula across a number of European Universities that offer similar degrees in RT. As discussed below, the input of the student body has been taken into consideration during the two revisions of the curriculum (over the past 10 years), as stated in the IER. However, there is no evidence in the IER and in the EEC's findings that the national professional body of TEI Radiological Technologists and the Greek professional bodies and learned scientific societies of the fields of Radiology, Radiotherapy, Nuclear Medicine and Medical Physics, have been invited as stakeholders in the setting up of the curriculum.

- *Is the curriculum content consistent with the objectives of the Curriculum and the requirements of the society?*

The curriculum content is consistent with its objectives in most of its aspects and covers comprehensively the requirements of the profession, within the context of the healthcare enterprise and the needs of the society.

- *How was the curriculum decided? Were all constituents of the Department, including students and other stakeholders, consulted?*

As described above, appropriate educational factors and standards, both European and International were taken into consideration, while the needs of the professional competency and societal requirements have guided the curriculum's core. All constituents of the Department, including students and management, appear to have been consulted in the curriculum development. However, there is a gap in the involvement of relevant national professional bodies and learned societies.

- *Has the unit set a procedure for the revision of the curriculum?*

The EEC found that no structured process for the revision of the curriculum was available, while the IER does not include any relevant information on this matter.

IMPLEMENTATION

- *How effectively is the Department's goal implemented by the curriculum?*

The EEC found that there has been an effective implementation of the Department's goal in the education and training of professional, university-level Radiologic Technologists.

- *How does the curriculum compare with appropriate, universally accepted standards for the specific area of study?*

The curriculum compares very well with European University curricula in similar areas, the European guidelines of professional bodies and networks (HENRE), European directives (Bologna Declaration and Accord) and the ISRRT educational standards, which are broadly adopted and well accepted, internationally.

- *Is the structure of the curriculum rational and clearly articulated?*

The structure of the curriculum is somewhat restricted by the TEI regulations and legal constraints imposed by the Ministry of Education, but it is otherwise very rational and clearly articulated to the students.

- *Is the curriculum coherent and functional?*

The curriculum is coherent and functional in its totality, but some of its functionality is impeded by the general guidelines of TEI teaching framework, which does not allow adaptation for subject-specific units. The area of the curriculum that suffers from this rigidity is the hospital-based training, which although adequate could benefit from better balance and flexibility.

- *Is the material for each course appropriate and the time offered sufficient?*

The material for each course is appropriate in most cases. However, the EEC members believe that the training and in-depth knowledge on the subspecialisation of Magnetic Resonance and Mammography Technologies is limited because of timetabling restrictions. Furthermore, due to similar timetabling, legal restrictions and associated regulatory issues, the subject of ultrasonography is not covered fully in the student's knowledge base, while there exists no sonography skills for the current graduates of the Department. The time offered in all subject areas of the curriculum is sufficient in general, but there is need for more practical hospital-based training.

- *Does the Department have the necessary resources and appropriately qualified and trained staff to implement the curriculum?*

The Department has relatively limited resources but have appropriately qualified and trained staff to implement the curriculum. However, more academic and technical staff is required as not all organic positions available for this Department have been fulfilled (as discussed in the IER and verified during the EEC's visit) due to TEI financial and resource limitations.

In addition, the following have been observed by the EEC:

1. The Siemens X-ray and mammography equipment are outdated and, although robust and serviceable locally, their critical device parts (e.g. X-ray tube) cannot be replaced. However, the Department has recently acquired a state-of-the-art Merate Digital Radiology System, which definitely enhances the student experience towards recent technological advances of the RT field.
2. The hospital-based training is based on a network of personal contacts of academic staff members, which was developed on a good will and voluntary basis. Unfortunately, there is neither an organizational nor a legislative framework that supports and implements the clinical hospital-based training, which is an essential and irreplaceable part of the curriculum.
3. There is limited and no formal, generic study skills training (e.g. using and citing literature in an appropriate manner, scientific writing skills, critical reading, analytical and synthetic learning, etc.).
4. Although there exist formal modules and lectures on hygiene, radiation protection and

associated radiological nursing, there is limited awareness of everyday practical behavior and conduct on issues of personal hygiene and protection of individual students, which was observed by the EEC during the hospital visits. Furthermore, in the areas of radiotherapy and nuclear medicine, for one of the hospital visited, the safety practice and conduct observed, by both the students and local staff, were inadequate. There is an urgent need for the Department to be given the legislative framework to formally vet and report issues that relate to lack of safety and hygiene for the hospital-based training, while the code of good practice and conduct should be embraced within the curriculum.

5. Despite some of the above mentioned issues observed, it was evident that the academic staff of the Department were putting extra efforts, beyond the expected level, to provide a fruitful, inspiring, safe and pleasant environment for study and practical training. However, shortcomings within the organisational and legislative framework of the TEI create all the above mentioned difficulties, which cannot be expected to be resolved easily by the academic staff.

RESULTS

- *How well is the implementation achieving the Department's predefined goals and objectives?*

The implementation of the curriculum is achieving the Department's predefined goals and objectives, above expectations, and provides adequately trained Radiological Technology graduates.

The curriculum **meets the criteria for bachelor level University education in this field and is comparable to equivalent degrees** in EU and internationally.

- *If not, why is it so? How is this problem dealt with?*

Not applicable.

- *Does the Department understand why and how it achieved or failed to achieve these results?*

The Department has a very good understanding of how they have achieved the goals and objectives of the curriculum, through their very good planning and organisation, whilst they understand the limitations of organisational, regulatory and legislative restrictions imposed on the curriculum by the overall TEI educational framework. In addition, there is limited autonomy introduced by the final organisation and approval mechanisms, originating from the Ministry of Education.

IMPROVEMENT

- *Does the Department know how the Curriculum should be improved?*

The Department and their curriculum development committee have a clear understanding of the issues mentioned in the results sub-section above. They have a

strategy to tackle issues and also clear plans on how to improve the content of the curriculum. However, there seems to be limited freedom for innovation and change, as many aspects of the curriculum are restricted by the uniform teaching framework imposed by the TEI regulations and State's legislative framework.

- *Which improvements does the Department plan to introduce?*

Under the limited flexibility given, the Department wishes to introduce enhancements in the following areas:

1. Improvements in the contact time and content for the subject area of Magnetic Resonance Imaging.
2. Enhancements in the areas of ethics and deontology for the specific profession of Medical Radiological Technologists.
3. Balancing the theoretical and practical aspects of the hospital-based training to an optimum, although there are many constraints in the potential implementation.

The EEC recommends the following points to be taken into consideration for the improvement of the Curriculum:

1. There is an urgent need for an overall consideration and revision of the appropriate balance between theoretical teaching and practical training.
2. Improvement should be made in Hygiene and Safety training.
3. Enhancements on practical training of radiation protection, at the level of hospital environments, are urgently needed.
4. There is a need to consider the value of re-introducing the subject areas of ultrasonography and mammography.
5. The curriculum can be further enhanced and improved in the depth and breadth of knowledge in the subject areas of digital imaging technologies, quality control for the emerging RT technologies and health informatics (in particular training for Picture Archiving and Communication Systems PACS and Radiological Information System RIS and their relationship to primary and secondary care electronic Healthcare Records)
6. The curriculum should include module(s) on critical reading and learning skills, research methods and research ethics.
7. There is a need for improved terminology and extra-curricular language training.

B. Teaching

APPROACH:

Does the Department have a defined pedagogic policy with regard to teaching approach and methodology?

The EEC has identified in the IER and has confirmed during the visit that the Department of Medical Radiological Technologists has a clear defined policy regarding the teaching strategy and approach. The main educational philosophy followed by the Department is based on competence-based training and learning.

Please comment on :

- *Teaching methods used*

There exists a good range of methods such as lectures, problem-based classes, laboratory-based classes, focus groups, student presentation and peer discussions, hospital-based structured exercises and theoretical training and project work with dissertation.

- *Teaching staff/ student ratio*

The teaching staff/student ration is on the high end of the average level expected in university-level Departments. However, it becomes more reasonable if the hourly paid instructors, whose employment is decided at the beginning of every academic year by the central administration of TEI, are included.

- *Teacher/student collaboration*

In general terms the teacher/student collaboration is working very well. There is provision in the timetable for dissertation level students to meet their tutors regularly, while evidence given from current students suggests that the academic members of staff are supporting the meetings in a flexible manner and with additional collaboration, during out of office hours. For other students, at all levels, the accessibility to the academic staff is excellent and all interviewed students have commended about the excellent collaboration environment available within the Department. However, there is variable support and collaboration with hospital-based training supervisors. Supervisors that are paid as hourly tutors follow an equivalent approach to the permanent staff. Supervisors that have informal relationships with the Department present a variable approach to their attitude of collaboration.

- *Adequacy of means and resources*

As mentioned in other sections of this report, there is evidence of limited resources in terms of space and up-to-date equipment. In terms of space, the teaching rooms and labs at the main building of the TEI are rigidly designed (fixed seating, old style classroom with limited benches, etc.) and do not allow for flexible teaching environment. However, the Department has made very good improvements in acquiring a state-of-the-art digital radiology training system, realistic phantoms, some modern QA equipment, IT infrastructure (see comments below). The Department uses own books and exercise

logbooks to train students and have a well informed set of notes and assistive training material both in printed and on-line form.

- *Use of information technologies*

A good use of IT for training and information relating to study issues is available. A well prepared website and a full on-line portal for training (on-line modules and Computer Assisted Learning CAL) and for organisation (timetabling, exam information, etc.). There is evidence of e-learning expertise within the group of academic staff, while some Professors of Technological Applications have postgraduate training in the field of e-learning for health professions.

- *Examination system*

Students are examined both at the level of continuous examination in labs and teaching sessions, including practical examination at hospital and final practical exercise. In addition, there exist two periods of written exams (first attempt) and 2 periods of resit exams for every academic year.

IMPLEMENTATION

Please comment on:

- *Quality of teaching procedures*

Overall, the quality of the teaching procedures is of high standard.

- *Quality and adequacy of teaching materials and resources.*

The materials and teaching resources are adequate for meeting the goals of the degree programme.

- *Quality of course material. Is it brought up to date?*

The course material is not only up to date but of high-standard in content.

- *Linking of research with teaching*

A small number of research active academics do an informal linkage between research and teaching by providing material that is research-informed from their individual research outcomes and experience.

- *Mobility of academic staff and students*

Very limited mobility of academic staff. Student mobility is evident but restricted by the reciprocal arrangements on limits of students (4-6 students per year) within the framework of exchange programmes of the Erasmus Radiography University Network.

- *Evaluation by the students of (a) the teaching and (b) the course content and study material/resources*

Generally, a positive evaluation on the course content, study material and resources (recognizing the current restrictions of the TEI) and a very positive feedback on the quality of academic teaching.

RESULTS

Please comment on:

- *Efficacy of teaching.*

Teaching is effective and the students achieve the learning objectives. Feedback is adequate but could be improved.

However, the EEC has observed the following shortcomings that need revision:

1. There is a variable use of dissertation structural and presentation standards, acknowledgement of material and referencing.
2. Dissertation quality variable with some very good and extensive dissertations, but some literature based dissertations, mostly descriptive in nature with limited critical analysis.
3. Non uniform norm is available and importance given, across the board, for the oral examination of students.

- *Discrepancies in the success/failure percentage between courses and how they are justified.*

There are no significant discrepancies in the success/failure percentage between courses, although some variation in hospital based practice assessment has been observed (see implementation section above).

- *Differences between students in (a) the time to graduation, and (b) final degree grades.*

A very small proportion of students complete their studies within the normal time to graduation with the majority graduating after an additional year. There is a significant amount of students stagnating. Final degree grade classification distribution is equivalent to international norms.

- *Whether the Department understands the reasons of such positive or negative results?*

The Department understands the main reasons for the large number of stagnating students that are mainly due to the University legislative system that allows the continuation of studies beyond the scheduled duration of the degree.

IMPROVEMENT

- *Does the Department propose methods and ways for improvement?*
- *What initiatives does it take in this direction?*

Although the Department recognises the need for improvement, the IER has limited strategy in this respect. Therefore, the EEC suggests the following items to be considered as part of its improvement strategy:

- Tutorials;
- Mentoring and personal tutors;
- Group project work;
- Stricter rules and zero tolerance on examination misconduct (e.g. student cheating during written exams or assignments, issues of plagiarism);
- Improved emphasis on health and safety issues and clinical hygiene education and practice, critical and analytical skills;
- Improved uptake of financial incentives and support for staff mobility;
- Teaching tailored to the students' personal needs based on assessed student skills;
- Improve motivation of students during the initial semesters through the teaching programme using appropriate content and involvement opportunities;
- Standardisation of marking and final result;
- Moderation of examination scripts and papers;
- External examiners;
- Improved monitoring of progress during hospital-based practicals;
- Improved feedback to students;
- Dissertation support on research methods, ethical issues and data collection and presentation, writing skills;
- Scholarships.

C. Research

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

APPROACH

The Department does not have a research strategy or policy with specific research objectives and there are no internal structures, standards or processes for assessing research. There is some research effort and some high quality outputs from a few members of staff, but on the basis of external collaborations on an individual basis rather than on research work based in the Department.

IMPLEMENTATION

- *How does the Department promote and support research?*
- *Quality and adequacy of research infrastructure and support.*
- *Scientific publications.*
- *Research projects.*
- *Research collaborations.*

There are no specific actions to promote and support research.

RESULTS

- *How successfully were the Department's research objectives implemented?*
- *Scientific publications.*
- *Research projects.*
- *Research collaborations.*
- *Efficacy of research work. Applied results. Patents etc.*
- *Is the Department's research acknowledged and visible outside the Department? Rewards and awards.*

Since the Department does not have a research strategy or policy with specific research objectives, there is no implementation of any research objectives and the limited Departmental research output, some of which is of very high quality, is through individual effort with external strong research groups mainly on cancer research. There is also a recent collaboration in a research grant with another Department in the School of Health and Social Care.

IMPROVEMENT

- *Improvements in research proposed by the Department, if necessary.*
- *Initiatives in this direction undertaken by the Department.*

The main initiative proposed by the Department for the improvement of research is a postgraduate study programme. Although this will be useful for the research activity and environment in the Department, there is no major initiative to promote and support a primary programme research of research work.

D. All Other Services

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

APPROACH

- *How does the Department view the various services provided to the members of the academic community (teaching staff, students).*

The EEC appreciated greatly the excellent condition of the buildings and the ambient environment, which are centrally maintained, with the absent of graffiti and very good hygienic facilities. The Department is well integrated with the rest of the school/institute, with most of its facilities (offices, lectures rooms, laboratories, secretariat office) in close proximity. Disabled access is available throughout the site; however the Department does not envisage catering for students with special needs. There are founded concerns for office space, with only 2 offices for academic staff, which do not allow for meetings, student tutorials, etc. Similar concerns regard the adequacy of the lecture rooms, which the EEC found to be borderline on what is acceptable with international standards for the number of students expected to cater for. The laboratory space is adequate for the existing equipment, however its size restricts the addition of any specialised equipment that could have greatly benefited the students' education, like CT or MR scanners, had an opportunity arisen to acquire them.

- *Does the Department have a policy to simplify administrative procedures? Are most procedures processed electronically?*

Administrative support is provided at both local level (departmental secretariat) and centrally, through shared TEI services, which include central administration, student information, career advice, counselling and support services. Most administrative procedures are processed electronically, with virtually all forms available via the departmental internet web page and can be submitted through a secure, web portal. The Department has correctly noted that local administrative services could be further improved by increasing the opening hours of the secretariat office for direct contact with students/staff.

- *Does the Department have a policy to increase student presence on Campus?*

The students have access to various facilities, which enhance their presence on Campus, outside the time allocated for teaching related activities, like lectures/laboratory work, etc. These include a central well equipped and laid out library, a health office, gym, restaurant and coffee bar. The newly built central auditorium is also used for academic, as well as, cultural events (theatre plays, etc.). However, the ECC found no evidence for student societies (cultural, sport activities etc.) and a lack of space for student entertaining (function rooms), both of which could have increased the presence of student's on Campus. There is no evidence of a departmental policy to increase the student present on Campus, apart from what is achieved by limited academic project work. There is no provision for an induction period ("freshers' week") for new students.

IMPLEMENTATION

- *Organization and infrastructure of the Department's administration (e.g. secretariat of the Department).*

The departmental secretariat is housed in a dedicated office in the vicinity of the Department. It provides support for both students and staff with fully computerised services through web-based secure and trusted remote access services. It opens for a rather restrictive 3 days per week from 11:00 to 13:00 for direct contact.

- *Form and function of academic services and infrastructure for students (e.g. library, PCs and free internet access, student counseling, athletic- cultural activity, etc.).*

The library provides with a host of relevant books for the Department, including the most important ones in the main subject areas of the curriculum, access to electronic journals and inter-library loan services. It offers web access, student study rooms and a dedicated teleconferencing room. There are excellent shared IT services for administrative and teaching support. The Department has a very well structured and helpful website, both in Greek and English. Free internet access is available for students. Catering services are provided by 2 separate facilities; one restaurant/coffee bar for students and a dedicated restaurant for staff, both very well organised, cost effective with computerised registration and payment for students, clean and hygienic, with a good ambience, providing overall with a very pleasurable experience. Free food is available for students. Accommodation is also free, but limited rooms are available in (non local) halls of residence shared with other H.E.I.s. A housing allowance is provided for rented accommodation in local houses that have been vetted through the accommodation support office. Means-tested, interest free loans for students for low income and special category students also exist. Free car parking for staff is provided on campus through a gated and secure parking facility. There is good access to public transport with reduced fares for students and clear information, including timetables for new students, is provided by the Departmental secretariat. The building infrastructure is maintained centrally. The lavatories are clean but lack of hand drying facilities and ventilation. The multiple purpose, general auditorium serves also as a cultural facility. There are no evidence for student societies and a lack of space for student entertaining facilities, such as function\or societies' rooms. There is a fully equipped gym.

RESULTS

- *Are administrative and other services adequate and functional?*
- *How does the Department view the particular results.*

The EEC agrees that the office space for academic staff is limited and not able to successfully support academic functions, like tutorials or student feedback on coarse work/ exams. Also limited is the storage space for administrative purposes (archiving). The operation of the laboratories was found satisfactory, however they were understaffed. The fully computerised and remotely accessible administrative departmental support (forms, exam results etc.) allows for a very effective, “round the clock” services. However, the students felt that the operating hours of the departmental secretariat office were limited and restricted. The library is well equipped and provides a very good service. However, some concerns were raised about the available space vis-à-vis the total number of students of the institute. The central IT services for administrative and teaching support are excellent, as is the departmental website, which is bilingual. The welfare, healthcare and catering facilities, for staff and students, are very good. Student accommodation is free but with limited spaces in shared non local halls of residence, whereas the allowance for renting at vetted private housing is limited. Although there is no structured induction programme, there is a new student information booklet and web based information, with redundant services for new student information by different administrative departments. There were concerns

raised on building maintenance regarding the speed and the quality of any repair work, which the EEC was not able to verify.

IMPROVEMENTS

- *Has the Department identified ways and methods to improve the services provided?*
- *Initiatives undertaken in this direction.*

The Department has identified and suggested a number of ways to improve services:

- An increase of the number of laboratory technicians, which will make laboratory operation more effective and release time for academic staff for other academic duties. However, this will have adverse consequences due to office space restrictions, unless accompanied by an increase in the amount of the available laboratory space.
- The secretarial support to be extended to more days and opening hours and the number of its staff to be increased. Although the EEC concurs with the former, it feels that the request for more secretariat staff should be considered *once* other means of service improvement have been implemented, like the aforementioned change of the office's "public" opening hours, the effectiveness of the collaboration with the School's/Institute's central administration offices. The EEC also suggests the acquisition of a flatbed scanner to reduce the (physical) space for manuscript storage and archiving.
- There was a request to improve the reading room space in the library and manuscript safekeeping but this did not appear to be a serious problem by the EEC. However, an increase on the library budget for the acquisition of new books would have been beneficial.
- There is a need for specific career advice service.
- There is a pressing need for space for offices, meeting rooms, student study rooms, lecture theatres and laboratories. Forward planning, at local level and in close collaboration with the central Institute, is needed to introduce flexibility in the planning of space that would enable to take into account of opportunities as and when they arise, e.g. the donation of a CT or MR scanner.
- The services provided by the estates and building maintenance division of the Institute need improving in relation to response time and provision of specialised technicians, but this was not confirmed by the EEC.
- The IT infrastructure needs to keep up with recent developments.
- There was a valid request for information regarding professional and career matters to be provided by the departmental web site.
- Improved access to on-line journals published both in Europe and USA, e-books and increased number of multiple copies of key textbooks in Radiology and related disciplines was requested, as was the update of the technical teaching equipment.
- The number of personal web-pages by academic staff needs to be increased.
- The Department in collaboration with the institute needs to consider ways to improve registration of new students, their accommodation and encourage the creation of the student societies and clubs.

Collaboration with social, cultural and production organizations

Please, comment on quality, originality and significance of the Department's initiatives.

The main collaborations involve the local hospitals and the relevant radiology/radiotherapy Departments for the clinical training of students. There are also some collaborations with national bodies related to radiology and radiation protection and the professional body of radiological technologists. Members of staff in the Department also participate in various relevant conferences, seminars and public lectures.

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.

Please, comment on the Department's:

- *Potential inhibiting factors at State, Institutional and Departmental level, and proposals on ways to overcome them.*
- *Short-, medium- and long-term goals.*
- *Plan and actions for improvement by the Department/Academic Unit*
- *Long-term actions proposed by the Department.*

The EEC, after consultation with the core and adjunct faculty of the Department, present and past students recommends the following goals:

Short term goals:

- Continuous evaluation of the educational approach. Specifically, the ratio between time spend in pre-clinical and clinical years/assignments should be discussed and adjusted on an annual basis, as it appears desirable to increase the time spend in clinical rotations.
- Establish formal guidelines trough edicts from the Ministries of Education and Health that permit clinical rotations in public Hospital throughout the country. Clinical rotations are presently established in an ad hoc way primarily because of personal contacts by the faculty.

Medium term goals:

- Increasing the Departmental research and establish inter-Departmental relations with other schools in TEI and University Departments in Greece.
- Developing Departmental and faculty research goals.

Long term goals:

- Improve the physical learning environment by providing additional space commensurate to the increase in the number of students attending the school of radiologic technology since its establishment.
- The laboratory and research equipment need to be modernized.
- Establishing one year post graduate programs (clinical fellowships) in specialties such as Magnetic Resonance Imaging, Computed Tomography, Interventional Radiology, Nuclear Medicine and Radiation Therapy.

F. Final Conclusions and recommendations of the EEC

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

The following constitute the conclusions and recommendations of the EEC on the Department of Medical Radiological Technologists, TEI of Athens:

1. The Department provides a very good level of university education for RT, comparable to European University Bachelor degrees. This is the only Department in the Greek Higher Education sector that can provide this university-based education and training, in the field of Medical Radiologic Technology.
2. The graduate output of the Department clearly fulfils the needs of the profession, the requirement of the Greek Healthcare System and the society.
3. The Department followed properly the overall evaluation process and conformed to ADIP guidelines – and therefore can use this experience in future evaluations. There is a need for more regular internal and factual based evaluations, to improve on research and teaching evolution strategies.
4. The Department has demonstrated very good practices in teaching and clinical training. Academic student support can be improved with the specific recommendations identified above. There is a clear need for a more specific research vision and planning.
5. The Department's readiness and capability to change and improve is very good. However, the Faculty should consider the issues relating to the Department's present academic situation in terms of staff's contribution to teaching and research, and proceed with some planned development and evolution. The Faculty's considerations should include the careful analysis of specific comments on good practices and weaknesses, identified and discussed by the EEC throughout the External Evaluation visit. To achieve this, the Faculty need more flexibility and support from the Institute and the Ministry of Education, to tackle the issues that arise from regulatory constraints and legal structures.
6. The Department's Quality Assurance Processes should be therefore formalised and agreed with the Institute.

The Members of the Committee

TECHNOLOGICAL EDUCATIONAL INSTITUTE OF ATHENS
DEPARTMENT OF RADIOLOGY

Dr. Theodoros Arvanitis

University of Birmingham, Birmingham, United Kingdom

Dr. Bill Baltzopoulos

Brunel University, London, United Kingdom

Dr. Jaap Kuyvenhoven

Hospital Gelderse Vallei Ede, The Netherlands

Dr. Spyros Manolopoulos

University Hospitals Birmingham, Birmingham, United Kingdom

Dr. Dimitrios Spigos

The Ohio State University, Columbus, Ohio, U.S.A.