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ΣΤΗΝ ΑΝΩΤΑΤΗ ΕΚΠΑΙΔΕΥΣΗ

HELLENIC REPUBLIC

**H.Q.A.**

HELLENIC QUALITY ASSURANCE AND  
ACCREDITATION AGENCY

## EXTERNAL EVALUATION REPORT

DEPARTMENT Product and Systems Design Engineering  
Aegean UNIVERSITY

JUNE 2012



## 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 Product and Systems Design Engineering ..... of the University of ...the Aegean..... consisted of the following four (4) expert evaluators drawn from the Registry constituted by the HQAA in accordance with Law 3374/2005 :

1. Dr \_\_\_\_\_ Christos Spitas \_\_\_\_\_ (President)  
(Title) (Name and Surname)

\_\_\_\_ Delft University of Technology, faculty of Industrial Design Engineering \_\_\_\_\_  
(Institution of origin)

2. Dr \_\_\_\_\_ Athanassios Economou \_\_\_\_\_  
(Title) (Name and Surname)

\_\_\_\_ Georgia Institute of Technology, College of Architecture \_\_\_\_\_  
(Institution of origin)

3. Dr \_\_\_\_\_ Panayotis Zaphiris \_\_\_\_\_  
(Title) (Name and Surname)

\_\_\_\_ Cyprus University of Technology, Department of Multimedia and Graphic Arts \_\_\_\_\_  
(Institution of origin)

4. Dr \_\_\_\_\_ Yiorgos Chrysanthou \_\_\_\_\_  
(Title) (Name and Surname)

\_\_\_\_ University of Cyprus, Department of Computer Science \_\_\_\_\_  
(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 (henceforth ‘the Committee’) visited the department of Product and Systems Design Engineering (henceforth ‘the Department’) of the university of the Aegean (henceforth ‘the University’) on the dates 26/6/2012 and 27/6/2012. It was greeted upon arrival (late evening 25/6/2012) by the head and the deputy head of the Department, and the vice Rector of the University, Profs. Darzentas, Chatzisavvas and Soulakellis respectively.

After the end of the formal proceedings of the visit, the Committee was cordially invited to a modest dinner by the head and deputy head of the department, in a spirit that was both hospitable, in the best Hellenic tradition, and appropriate.

In the two days of the visit the Committee met with the internal evaluation team (OMEA) and the chairman of the internal evaluation unit (ΜΟΔΙΠ), members of the faculty (ΔΕΠ), students of the undergraduate, post-graduate and doctoral programmes, external instructors (ΠΔ 407) and support staff of various capacities (ΕΕΔΙΠ, secretariat, technical support, etc) and was shown the rooms and facilities used for education, workshops, research, administrative support, and the library. The Committee was also given a tour of an exhibition of works by 1<sup>st</sup> year students. Discussions were conducted in a visibly self-reflective and constructive spirit by all persons interviewed and were open and informative.

The Committee was provided in advance of the visit with the internal evaluation report written by the Department, a website featuring information pertinent to the audit and electronic copies of the presentations given. In addition, the Committee requested and received electronic copies and paper printouts from project work by students.

Further, the Committee requested additional clarifications regarding the self-perception of the Department on the main categories of this evaluation, and received them by email in the morning of 28/6/2012, which allow it to take these into consideration as well.

Overall, the Committee is satisfied with and commends the welcoming and cooperative attitude of the Department and University, who made all pertinent resources available to the needs and purposes of the audit. Especially, the on-line documentation was a well-executed, useful and beyond what was formally required initiative, in line with good international practices.

## 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 report is thorough and reasonably complete. In some cases data was repeated more than once in different locations in the internal evaluation report. This may have been caused by the format of the template.

The Committee believes that the internal evaluation report served as a good starting point for self-evaluation and reflection.

## **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?
- How were the objectives decided? Which factors were taken into account? Were they set against appropriate standards? Did the unit consult other stakeholders?
- Is the curriculum consistent with the objectives of the Curriculum and the requirements of the society?
- How was the curriculum decided? Were all constituents of the Department, including students and other stakeholders, consulted ?
- Has the unit set a procedure for the revision of the curriculum?

The Department stated that it has as its main goal the establishment of a design school and corresponding curriculum in Greece. The committee agrees that the existence of a design school in Greece is important for society and industry. After around 10 years of operation, from the data provided to the Committee it is evident that the Department has successfully created a community of graduate designers.

The Department developed for this purpose a 5 year undergraduate programme resulting in the award of a diploma in Product and Systems Engineering and soon after a 1 ½ year post-graduate programme resulting in the award of an MSc degree in Design of Interactive and Industrial Products and Systems. An additional post-graduate curriculum has been developed resulting in the award of an MSc in Holistic Alternative Therapeutical Systems.

The Department described an annual procedure for revising the curriculum which includes discussion at the undergraduate study programme committee and then at the council of the Department with participation of students and academics.

### *UNDERGRADUATE CURRICULUM*

There was an attempt to align the goals and objectives of the undergraduate curriculum with the general goal of the department but this is not fully clear. The Department strongly bases the development of the curriculum on an initial international workshop that took place in 2000, which was an excellent initiative. Since then, it is apparent to the Committee that the curriculum went through a number of revisions that were not always aligned with academic objectives. For example, a graphic art initial focus (and student cohort) was dropped, focusing later more on engineering design with a stated goal of achieving Engineering Council recognition (which was not achieved in the end).

The Department curriculum has at its centre the concept of systemic theory and follows three main 'pillars':

- Human Product/Systems Interaction (HCI, ID)
- Engineering (Computer Aided Design)
- Management (Organizational Design)

According to the Department, the first pillar (HCI) is based on the need for interactive computer systems that take the end user and their interaction with the system into account. The second pillar focuses on the design of systems using computing technology (Computer Aided Design). The third pillar, organizational design focuses on management of the design process (design management).

The HCI pillar has a clear focus and is well implemented.

The Engineering pillar seems not-sufficiently-implemented, with perhaps undue emphasis on CAD, a manifest absence of manufacturing as a strong consideration (enabler, constraint, inspiration), of costing and in general a lack of sufficient focus in knowledge and methods for embodiment design.

The Management pillar contains interesting theory, that the Committee thinks essential, but the connection to the other two pillars and the actual design process is not sufficiently visible.

Further, the list of courses is not clearly aligned to the pillars and is not clear whether the goal of the curriculum is to equip students with enough knowledge on all three directions or to work towards student specialization. The study guide gives adequate information about each course, and is generally on-par with many study guides from other Hellenic universities, but all-the-same does not help to build a mental big picture, or set a direction in one's studies.

#### *POST-GRADUATE CURRICULUM*

The MSc programme in Design of Interactive and Industrial Products and Systems has a clear relevance to the department and its goals. This is further attested by the diversity of the students' backgrounds.

The MSc programme in Holistic Alternative Therapeutical Systems - Classical Homeopathy is out of place and not aligned with the goals of the Department. Furthermore, it is not relevant to the expertise of the Department staff and cannot be offered without the support from a department with strong expertise in medicine. *Given this, the committee is of the opinion that the specific master should be discontinued (Recommendation A.1).*

*New post-graduate programs should be thought carefully and focus on the strengths of the department and aligned with its goals and ambitions (Recommendation A.2).*

#### IMPLEMENTATION

- How effectively is the Department's goal implemented by the curriculum?
- How does the curriculum compare with appropriate, universally accepted standards for the specific area of study?
- Is the structure of the curriculum rational and clearly articulated?
- Is the curriculum coherent and functional?
- Is the material for each course appropriate and the time offered sufficient?
- Does the Department have the necessary resources and appropriately qualified and trained staff to implement the curriculum?

The Committee believes that the initial focus might have slowly shifted to something that is not anymore that clear, as is usually the case with curricula after a period of years (usually also influenced by a need for recognition of professional rights by i.e. the Technical Chamber of Greece). There is a need for re-thinking and re-focusing of the curriculum. In general the

curriculum needs a crisper identity and uniqueness. In particular:

- 1) *There is a need for clear learning lines throughout the studies, which would be manifested in stated pre-requisites and explicit relations between courses (Recommendation A.3).*
- 2) The department focuses its teaching of product design on the conceptual level, with embodiment and validation apparently not sufficiently implemented. This limits the creativity potential of students and prevents them from actively engaging in realistic evaluation of their products and systems. This was confirmed also by comments raised at meetings with the students and the teaching staff of the Department. *Therefore the Committee is of the opinion that the students need to engage more with hands-on design exercises that focus on the whole design cycle (think-build-test) including the evaluation of materialised prototypes (Recommendation A.4).*
- 3) The curriculum is based on a set of theoretical/methodological foundation courses and eight studio-based courses. The Committee believes that the studio courses are a commendable initiative and one that can be improved and strengthened. The students reported problems in that the studios seem to be solely based on discussions and critique of designs than active real-time engagement in hands-on design activities, as would be the international practice. *The extensive use of ICT in design (product design in CAD) should be in part replaced and augmented by the engagement of the students with real material suitable for form-giving experimentation (plastecine, plastic, cardboard etc) and functionality testing by building functional prototypes (mechanical, mechatronic) (Recommendation A.5).*

#### RESULTS

- How well is the implementation achieving the Department's predefined goals and objectives?
- If not, why is it so? How is this problem dealt with?
- Does the Department understand why and how it achieved or failed to achieve these results?

The committee notes that the implementation of a compulsory practical training scheme is positive. This seems to be managed effectively and efficiently, giving the chance to the students to get a good understanding of real industrial situations and problems. The reported low unemployment of graduates (9%) and the acceptance of graduates for post-graduate studies in well-known universities abroad are good signs that the department is contributing to the creation of a university educated design community in Greece.

Besides the practical training, the rest of the curriculum could have more emphasis on working with materials and real products, as discussed previously.

#### IMPROVEMENT

- Does the Department know how the Curriculum should be improved?
- Which improvements does the Department plan to introduce?

The Committee suggests to consider the recommendations given in the previous sections.

The department is making attempts to align its program with the ECTS. In the Committee's view this should be a continuous and high priority goal of the Department. *The current*

*taught course load is considered by the Committee too high for an undergraduate program. Alignment with ECTS should also involve re-structuring of the curriculum including discussions about reducing the duration of the undergraduate program from 5 years to a shorter program (Recommendation A.6).*

The goal of establishing new teaching and research labs is noted and if implemented it will indeed improve the teaching quality of the department.

The Committee notes positively that the Department is self-aware in terms of the core added value of its undergraduate curriculum and does not necessarily seek recognition of professional rights by the Technical Chamber of Greece. Instead it is focusing on building with its alumni a design community, as per world best practice. The interviewed students share this vision.

## **B. Teaching**

### APPROACH

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

Please comment on:

- Teaching methods used
- Teaching staff/ student ratio
- Teacher/student collaboration
- Adequacy of means and resources
- Use of information technologies
- Examination system

Teaching methods include both lecture-based teaching and project-based teaching. The sequence of studios (2-8), the core course sequence of the undergraduate curriculum, relies exclusively in project-based teaching. The majority of the rest of the classes appears to rely exclusively on lecture-based teaching. Some courses appear to rely on both methods.

The general faculty includes 13 academic faculty and 16 (14 full-time) adjunct faculty. The undergraduate students are estimated to be around 500 (an annual intake of 80 undergraduate students\* 5 years of the duration of the studies + approximately 100 students that have not graduated yet). The graduate students are estimated to be around 50 (an intake of 25 graduate students for approximately 1 1/2 and 2 years of studies for the two masters degrees respectively). There are also approximately 10 doctorate students. The total teaching staff to the total student body appears to be approximately in the scale of 550:25 or 22:1 which is an appropriate ratio.

The teacher /student collaboration features strong in the project-based learning methods of the department and in particular within the studio course sequence, the core of the design curriculum. These courses require a close collaboration between the individual student or team of students with the faculty who supervises and guides the work.

The ratio of permanent faculty and adjunct faculty is 13:14. All studio classes (studio 3,4,5,6,7 and 8) are primarily delivered by adjunct faculty. All permanent faculty and adjunct faculty teach typically five courses per year, four for the undergraduate level (two each semester) and one for the graduate level. The Committee formed the general impression that all staff, permanent and non-permanent, are enthusiastic about their teaching and are successfully transmitting their enthusiasm to students.

Information technologies are used for the electronic management, storage and presentation of teaching materials, as well as for support of the teaching within the classrooms and labs. This works well.

The examination system includes an array of diverse methods such as end of the semester exams, tests, and design reviews.

In all, the Department appears to have an ambitious and multi-focal pedagogic policy with regard to teaching approach and methodology, which might cause a lack of consistency. In particular, *there appears to be an ambiguous treatment of studio, the core course of design curriculum. Some design schools rely on the studio method (a master and apprentice model whereas the experienced teacher/designer guides the student/novice through an arduous but rewarding way (Schon, 1999), while others take on a more hard look at engineering design synthesis by-passing the studio model and relying more on mathematical formalisms of all kinds (see, for example, Stiny, 2006; Kagan et al, 2001). This is a hard problem to take on and the policy to teaching approach and methodology is indelibly tied to curriculum issues. The department might consider to take one of the available consistent routes (Recommendation B.1).*

#### REFERENCES

- Erik Antonsson, Jonathan Cagan, 2001. Formal Engineering Design Synthesis, Cambridge University Press
- Donald Schon, 1990. Educating the Reflective Practitioner: Toward a New Design for Teaching and Learning in the Professions, Higher Education Series: Jossey-Bass.
- George Stiny , 2006. Shape: Talking about Seeing and Doing. MIT Press

#### IMPLEMENTATION

Please comment on:

- Quality of teaching procedures
- Quality and adequacy of teaching materials and resources.
- Quality of course material. Is it brought up to date?
- Linking of research with teaching
- Mobility of academic staff and students
- Evaluation by the students of (a) the teaching and (b) the course content and study material/resources

The course materials appear to be brought up to date with the current state-of-the-art in the various fields. The commitment of the Department to new technologies and the web at large guarantees the update of the material.

The mobility of academic staff and students is supported, encouraged and adequately planned. Within the Erasmus program and since 2008, a total of 2 faculty and 29 students have gone abroad and 1 faculty and 10 students have come to the department. *An increase in the mobility of faculty and students as well a better balance of outgoing/incoming faculty and students are certainly desirable (Recommendation B.2).*

#### RESULTS

Please comment on:

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

- Differences between students in (a) the time to graduation, and (b) final degree grades.
- Whether the Department understands the reasons of such positive or negative results?

The student success rate is not the same in all courses. This pattern appears to be similar to observed patterns in other departments with similar courses. Design students tend to focus more on design classes and have a more difficult time with basic courses such as mathematics, physics etc.

The differences between students in the time to graduation and final degree grades appear to be on par with current patterns observed in design schools and/or the Universities in Greece.

#### IMPROVEMENT

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

The Department proposes various ways for improvement of teaching including the acquisition of additional physical space, additional ICT technology to be deployed in classrooms and teaching labs, recruitment of more faculty and so on. Undoubtedly all these initiatives are on the right direction but they still need to be clearly ranked and prioritized. In line with a re-thinking of the curriculum, these needs should be reassessed.

The Committee recommends that *the standing internal curriculum committee should also concern itself with teaching methods and didactics, and to annually compare the Department's policies and methods regarding teaching with the corresponding data of a) peer institutions; and b) institutions of excellence (Recommendation B.3).*

## **C. Research**

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

### **APPROACH**

- What is the Department's policy and main objective in research?
- Has the Department set internal standards for assessing research?

The Department aspires to produce quality research output in all 3 pillars that underpin it. It is a very multi-disciplinary department with academics both from the arts and sciences. It has a particularity in the sense that a number of members of staff come from a background where novelty is not presented in the form of academic papers but through exhibitions and design competitions. This also entails that the internal standards for assessing research cannot be uniform throughout 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.

The Department provides funding for all faculty to attend conferences and present their work. It also provides some small funding for equipment. The Department has organized conferences, which is in general a good way for promoting a new department, although the conferences are not of high profile in the department's research areas.

The research infrastructure is poor. The constraints within which the Department operates (lack of funding for equipment, limited space, relative isolation) are surely a decisive factor and are well understood and appreciated by the Committee.

The department has defined two research labs which remain virtual, without dedicated research lab space.

A lot of the research relies on implementation through the undergraduate and MSc student projects. This commendable initiative gives a very valuable and unique opportunity to the students and academics alike.

There seems to be a certain difficulty in employing researchers to assist the academic staff push forward their ideas. This can be a serious hurdle, especially in areas that require considerable development or experimentation for producing state of the art results (CAD, VR, Security etc.).

Based on the meeting with the available PhD students, the Committee concludes that there does not appear to be a strong PhD student community in the Department, instead each PhD student mostly collaborates with their corresponding supervisor.

There is an attempt to attract foreign students through scholarships. This commendable effort seems to have brought at least one PhD student.

### **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.

The department has a steady stream of journal and conference publications, about 10 journal papers and 10 conference papers per year, the journals and conferences being of varied quality and impact. *The Department should strengthen its focus on high rank journals that have international impact (Recommendation C.1).*

There is a considerable amount of external funding coming into the Department, however it is not obvious how it increases the research productivity locally. No researchers are employed locally from such funds, as far as the Committee could see, and most of the running projects are not research focused.

#### IMPROVEMENT

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

Aside from one or two faculty, there are limited collaborations with international researchers that result in co-authored publications. *More educational leave of absence should be encouraged, in order to initiate and strengthen collaborations with other high esteemed institutes abroad. This is particularly important for the young faculty members, especially those who carried out their doctoral studies in the Department/University, who should be encouraged to gain more international experiences through a sabbatical or summer collaboration visits at renowned universities abroad (Recommendation C.2).*

There is a clear need for more research equipment and dedicated research lab space. The Department puts high importance to expected ESPA funding that could hopefully resolve these issues.

A number of initiatives needs to be taken in order to cultivate a departmental research culture:

1. *Allocate physical space for the research laboratories, with space for the PhD students and other researchers, as per international best practices (Recommendation C.3)*
2. *Hold a recurring research seminar where researchers can discuss their latest work, their ideas or even present interesting new international results (Recommendation C.4)*
3. *Compile and publish an annual research report of the members of academic staff. (Recommendation C.5)*
4. *Establish a research committee to oversee the creation of a well-focused departmental research and doctoral study policy. This research committee will need to set clear goals for the research directions of the department. What is (are) the area(s) that the Department wishes to be internationally renowned? What are*

*the strategic steps needed to be taken towards that direction? (Recommendation C.6)*

5. *Recruit senior faculty with established body of work and international experience who could help strengthen the research impact of the Department (Recommendation C.7).*

## **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).
- Does the Department have a policy to simplify administrative procedures? Are most procedures processed electronically?
- Does the Department have a policy to increase student presence on Campus?

The Department is satisfied with the overall level and quality of services provided to the members of the academic community. As far as could be ascertained, almost all services by the secretariat and technical support are offered through an electronic interface, with mean time to completion between filing of a request and servicing this request well under one day. Motivated also by difficulties inherent in the geographical spread of the University units and the sometimes overwhelming paperwork that is characteristic of the Hellenic administrative framework, the Department's policy towards administration has been to use ICT/ electronic information processing as much as possible.

### IMPLEMENTATION

- Organization and infrastructure of the Department's administration (e.g. secretariat of the Department).
- 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 Department support staff is divided into a secretariat, an ICT technical support group, a library support, and a finance support group.

The committee was informed that besides the study advisor, who advises students on academic choices at the Department, students are counselled ad hoc by individual staff and faculty. *Organised coaching/counselling on other issues (i.e. personal) is not in place. This should be put in place (Recommendation D.1).*

### RESULTS

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

From interviews with both the service staff and its client groups (students, faculty, management) the Committee formed the opinion that the support services work well and effectively. It was told that ICT support calls are typically resolved in well under a day, and the same is true for the issue of certificates etc secretariat-related processes, owing to the functionality of the electronic system. It is clear to the Committee that the staff is motivated and service/ client-oriented.

The Department reported its satisfaction with the results.

#### IMPROVEMENTS

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

The Department displayed good awareness of further possibilities for improvement, with the acquisition of new ICT hardware and the constant improvement of the functionality of available spaces and material means. The staff itself seems to be growing in its client-orientation and job satisfaction, which the Committee agrees is the most important driver for improvement.

One clear point that the Department proposes is the extension of the services of its support structure and staff to more departments of the University, especially if they would be collocated. As it stands, *the Department is aware that its support staff to students/faculty ratio is quite high, especially given the displayed efficiency of these services, and is willing to contribute its extra capacity towards the benefit of the University (Recommendation D.2).*

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

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

The Department's initiatives include organisation of social events, educational excursions in Greece and abroad, local art exhibitions and other activities. All are effective and vibrant.

Connection with industry exists through the practical training process and diploma theses.

#### ***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 short, medium and long term goals and strategy of the Department are highly influenced by its location (the distributed nature of the university) and the state policies. A repeated trend at all our meetings with the staff was the concern regarding the fluid situation concerning financial and policy issues at state level. Uncertainty regarding future employment prospects of adjunct staff, dependence on state funding for facility and research infrastructure expansions and continuous changes in the ministry of education laws causes both confusion and uncertainty. These were also presented in the form of a well-informed

SWOT analysis. The Committee acknowledges that all these do create a difficulty for the Department to set long term goals that they can be certain that they will be able to implement.

Their long term goal for the establishment of an Engineering and Design School as part of the University of the Aegean is well understood and needed. The strategy for achieving it is still unclear and we understand it is highly depended on external factors.

The Committee thinks that *the Department should put in place long term goals and strategy and compile and publish them in a regularly updated executive document. This will at its minimum allow the staff to engage in a dialogue that will lead to a priority of their objectives and aspirations (Recommendation E.1).*

There is also absence of well-defined strategies for creating research culture and increasing the research reputation of the department, see recommendations in Section C.

The committee considers that the strategic outlook of the Department is influenced perhaps too much by its origins: a small motivated group of academics with a strong and healthy vision, which has served as the nucleus for the formation of a tight and mostly like-minded team. This has served the Department very well through its start-up period. However, *the Department is keenly aware of the concept of ‘emergence’ and advocates the benefits of plurality. Therefore the committee wishes to strengthen this mentality and recommends as an urgent strategic priority the additional recruitment of established international experts, previously unaffiliated to the Department, at the full professor level (Recommendation E.2).*

Thereafter, the Committee believes that a refinement of the vision and a crisper operationalization thereof at the curricular and research level can be undertaken, as part of a natural cycle of strategic planning (see recommendations in sections A and C and E.1).

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

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

Conclusions and recommendations of the EEC on:

- the development of the Department to this date and its present situation, including explicit comments on good practices and weaknesses identified through the External Evaluation process and recommendations for improvement
- the Department’s readiness and capability to change/improve
- the Department’s quality assurance.

The main conclusions and recommendations of the Committee, explained in detail within the relevant fields in this report, are summarised here as follows:

The location (island, part of a distributed university) and context (absence and emergence of a design culture in Greece) affect significantly the Department, presenting both opportunities

and challenges, which the Department, to its credit, manages to turn mostly to its benefit. The faculty and support staff form a tightly knit team and community. The same applies to the student body, and to the students and faculty as a whole. Staff and students are enthusiastic and motivated.

Leadership is vigorous and deserves credit for a very good progress of what was 10 years ago a risky and unique, at national level, start-up. Administrative support is very good and service/ client-oriented. There is good connection with the local society. The practical training is well-implemented. Students and many staff are self-aware as belonging to a meaningful discipline recognised by the industry and society, without worrying about professional recognition by the Technical Chamber of Greece, which is healthy. A sufficient number of students joining the Erasmus programme gives them a good international outlook. The Department implements course evaluation and has demonstrated that it used the feedback to improve.

At the same time there are points for improvement and in some cases issues of serious concern that should be addressed by: re-thinking of an overarching strategy, involving both goals and staffing policy, the curriculum, teaching and certainly a research identity, community, culture and supporting infrastructure. Improvements can be made in the connection between vision and its operationalization. The profile of the graduates deserve special and constant attention, to ensure that the Department continues to train societally relevant professionals and academics that can compete at an international level. Specific recommendations can be found (in context) throughout this report. They are summarised hereafter for convenience. Clearly, *priorities should be set with regard to these recommendations, with those of a more strategic nature taking precedence*, in the Committee's opinion.

In all, the Department gives the impression of a vibrant, ambitious, perhaps too much at its current growth and infrastructure level, and certainly promising academic unit, that deserves support and recognition. The Committee is confident that, if its recommendations are taken into account, this visionary start-up can eventually attain an academic level of international significance.

#### Summary of Recommendations:

1. *the master in Holistic Alternative Therapeutical Systems - Classical Homeopathy should be discontinued (Recommendation A.1).*
2. *New post-graduate programs should be thought carefully and focus on the strengths of the department and aligned with its goals and ambitions (Recommendation A.2).*
3. *There is a need for clear learning lines throughout the studies, which would be manifested in stated pre-requisites and explicit relations between courses (Recommendation A.3).*
4. *the students need to engage more with hands-on design exercises that focus on the whole design cycle (think-build-test) including the evaluation of materialised prototypes (Recommendation A.4).*
5. *The extensive use of ICT in design (product design in CAD) should be in part replaced and augmented by the engagement of the students with real material suitable for form-giving experimentation (plastecine, plastic, cardboard etc) and functionality testing by building functional prototypes (mechanical, mechatronic)*

*(Recommendation A.5).*

6. *The current taught course load is [...] too high for an undergraduate program. Alignment with ECTS should also involve re-structuring of the curriculum including discussions about reducing the duration of the undergraduate program from 5 years to a shorter program (Recommendation A.6).*
7. *there appears to be an ambiguous treatment of studio, the core course of design curriculum.[...] The department might consider to take one of the available consistent routes (Recommendation B.1).*
8. *An increase in the mobility of faculty and students as well a better balance of outgoing/incoming faculty and students are certainly desirable (Recommendation B.2).*
9. *the standing internal curriculum committee should also concern itself with teaching methods and didactics, and to annually compare the Department's policies and methods regarding teaching with the corresponding data of a) peer institutions; and b) institutions of excellence (Recommendation B.3).*
10. *The Department should strengthen its focus on high rank journals that have international impact (Recommendation C.1).*
11. *More educational leave of absence should be encouraged, in order to initiate and strengthen collaborations with other high esteemed institutes abroad. This is particularly important for the young faculty members, especially those who carried out their doctoral studies in the Department/University, who should be encouraged to gain more international experiences through a sabbatical or summer collaboration visits at renowned universities abroad (Recommendation C.2).*
12. *Allocate physical space for the research laboratories, with space for the PhD students and other researchers, as per international best practices (Recommendation C.3)*
13. *Hold a recurring research seminar where researchers can discuss their latest work, their ideas or even present interesting new international results (Recommendation C.4)*
14. *Compile and publish an annual research report of the members of academic staff. (Recommendation C.5)*
15. *Establish a research committee to oversee the creation of a well-focused departmental research and doctoral study policy. This research committee will need to set clear goals for the research directions of the department. What is (are) the area(s) that the Department wishes to be internationally renowned? What are the strategic steps needed to be taken towards that direction? (Recommendation C.6)*
16. *Recruit senior faculty with established body of work and international experience who could help strengthen the research impact of the Department (Recommendation C.7).*
17. *Organised coaching/counselling on other issues (i.e. personal) is not in place. This should be put in place (Recommendation D.1).*
18. *the Department is aware that its support staff to students/faculty ratio is quite high, especially given the displayed efficiency of these services, and is willing to contribute its extra capacity towards the benefit of the University (Recommendation D.2).*

19. *the Department should put in place long term goals and strategy and compile and publish them in a regularly updated executive document. This will at its minimum allow the staff to engage in a dialogue that will lead to a priority of their objectives and aspirations (Recommendation E.1).*
20. *as an urgent strategic priority the additional recruitment of established international experts, previously unaffiliated to the Department, at the full professor level (Recommendation E.2).*

## The Members of the Committee

Name and Surname	Signature
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