



Αριστείδου 1 & Ευριπίδου 2 • 10559 Αθήνα | 1 Aristidou str. & 2 Evripidou str. • 10559 Athens, Greece T. +30 210 9220 944 • E. secretariat@ethaae.gr • www.ethaae.gr

Αθήνα, 02/07/2020 Αρ. πρωτ.: 16563

#### ΑΠΟΦΑΣΗ ΠΙΣΤΟΠΟΙΗΣΗΣ

#### Το Συμβούλιο Αξιολόγησης και Πιστοποίησης της Εθνικής Αρχής Ανώτατης Εκπαίδευσης (ΕΘΑΑΕ)

#### Έχοντας υπόψη:

- 1. Τις διατάξεις των άρθρων 14, 64, 65, 66, 67, 68, 69, 70, 71, 72 και 80 του Ν. 4009/2011 (ΦΕΚ 195/Α΄/06-09-2011) «Δομή, λειτουργία, διασφάλιση της ποιότητας των σπουδών και διεθνοποίηση των ανωτάτων εκπαιδευτικών ιδρυμάτων», όπως τροποποιήθηκε και ισχύει.
- 2. Τις διατάξεις των άρθρων 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 και 59 του Ν. 4653/2020 (ΦΕΚ 12/Α΄/24-01-2020) «Εθνική Αρχή Ανώτατης Εκπαίδευσης. Ειδικοί Λογαριασμοί Κονδυλίων Έρευνας Ανώτατων Εκπαιδευτικών Ιδρυμάτων, Ερευνητικών και Τεχνολογικών Φορέων και άλλες Διατάξεις».
- 3. Την υπ΄ αριθμ. 18135/Z1/7-2-2020 Απόφαση της Υπουργού Παιδείας και Θρησκευμάτων (ΦΕΚ 94/τεύχος ΥΟΔΔ/7-2-2020), περί διορισμού του Προέδρου του Ανώτατου Συμβουλίου της Εθνικής Αρχής Ανώτατης Εκπαίδευσης (ΕΘΑΑΕ).
- 4. Την υπ΄ αριθμ. 15650/23-04-2020 Απόφαση του Προέδρου της ΕΘΑΑΕ (ΦΕΚ 329/τ.' ΥΟΔΔ/04-05-2020) «Ορισμός των μελών του Συμβουλίου Αξιολόγησης και Πιστοποίησης (ΣΑΠ) της Εθνικής Αρχής Ανώτατης Εκπαίδευσης (ΕΘΑΑΕ)».
- 5. Την 2/29-05-2020 συνεδρίαση του Συμβουλίου Αξιολόγησης και Πιστοποίησης, θέμα 2.1 «Έγκριση των 44 Εκθέσεων σύμφωνα με το συνημμένο πίνακα Χορήγηση Πιστοποίησης».

#### ΠΙΣΤΟΠΟΙΕΙ ΟΤΙ

το Πρόγραμμα Προπτυχιακών Σπουδών

#### Μηχανικών Πληροφοριακών και Επικοινωνιακών Συστημάτων του Πανεπιστημίου Αιγαίου

συμμορφώνεται πλήρως με τις αρχές του Προτύπου Ποιότητας ΠΠΣ της ΕΘΑΑΕ και τις Αρχές Διασφάλισης Ποιότητας του Ευρωπαϊκού Χώρου Ανώτατης Εκπαίδευσης (ESG 2015) για το επίπεδο σπουδών 7 του Εθνικού και Ευρωπαϊκού Πλαισίου Προσόντων.

Η διάρκεια ισχύος της πιστοποίησης ορίζεται για τέσσερα έτη, από 29-05-2020 έως 28-05-2024.

Ο Πρόεδρος της ΕΘΑΑΕ

Καθηγητής Περικλής Α. Μήτκας











#### ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ **ΑΛΙΙΙ**

ΑΡΧΗ ΔΙΑΣΦΑΛΙΣΗΣ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΣΤΗΝ ΑΝΩΤΑΤΗ ΕΚΠΑΙΔΕΥΣΗ

## HELLENIC REPUBLIC **HQA**HELLENIC QUALITY ASSURANCE AND ACCREDITATION AGENCY

# Accreditation Report for the Undergraduate Study Programme (Integrated Master) of: INFORMATION & COMMUNICATION SYSTEMS ENGINEERING

UNIVERSITY OF THE AEGEAN

Date: 8 December 2019

ΑΡΙΣΤΕΙΔΟΥ 1 & ΕΥΡΙΠΙΔΟΥ, 105 59 ΑΘΗΝΑ Τηλ.: +30 210 9220944, FAX: +30 210 9220143 Ηλ. Ταχ: adipsecretariat@hqa.gr. Ιστότοπος: http://www.hqa.gr

1, ARISTIDOU ST., 105 59 ATHENS, GREECE Tel.: +30 210 9220944, Fax: +30 210 9220143 Email: adipsecretariat@hqa.gr, Website: www.hqa.gr









Με τη συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης

Report of the Panel appointed by the HQA to undertake the review of the Undergraduate Study Programme (Integrated Master) of Information and Communication Systems Engineering of the UNIVERSITY OF THE AEGEAN for the purposes of granting accreditation.

#### Abbreviations used in this report:

| ACM           | Association for Computing Machinery                                     |
|---------------|---|
| AIS           | Association for Information Systems                                     |
| AP            | Accreditation Panel   |
| CEO           | Chief Executive Officer   |
| ECTS          | European Credit Transfer System   |
| EDIP          | Support Teaching Staff  |
| ETEP          | Specialist Technical Staff  |
| HQA/ADIP      | Hellenic Quality Assurance and Accreditation Agency (ΑΔΙΠ)              |
| ICSD          | Information and Communication Systems Engineering                       |
| IEEE          | Institute of Electrical and Electronic Engineers                        |
| IEGs/OMEA     | Internal Evaluation Groups / Department's Internal Evaluation Committee |
| QAU/<br>MODIP | Quality Assurance Unit (ΜΟΔΙΠ)  |
| UGP           | Undergraduate Study Programme   |
| UA            | University of the Aegean  |
| ΕΣΔΠ          | Εσωτερικό Σύστημα Διασφάλισης Ποιότητας                                 |
| ΠΠΣ           | Πρόγραμμα Προπτυχιακών Σπουδών  |

#### **TABLE OF CONTENTS**

| Part A: Background and Context of the Review                                  | 5  |
|---|----|
| I. The Accreditation Panel  | 5  |
| II. Review Procedure and Documentation  | 6  |
| III. Study Programme Profile  | 11 |
| Part B: Compliance with the Principles  | 13 |
| Principle 1: Academic Unit Policy for Quality Assurance                       | 13 |
| Principle 2: Design and Approval of Programmes                                | 16 |
| Principle 3: Student-centred Learning, Teaching and Assessment                | 19 |
| Principle 4: Student Admission, Progression, Recognition and Certification    | 21 |
| Principle 5: Teaching Staff   | 23 |
| Principle 6: Learning Resources and Student Support                           | 25 |
| Principle 7: Information Management   | 27 |
| Principle 8: Public Information   | 29 |
| Principle 9: On-going Monitoring and Periodic Internal Review of Programmes . | 31 |
| Principle 9: On-going Monitoring and Periodic Internal Review of Programmes . | 32 |
| Principle 10: Regular External Evaluation of Undergraduate Programmes         | 33 |
| Principle 10: Regular External Evaluation of Undergraduate Programmes         | 34 |
| Part C: Conclusions   | 35 |
| I. Features of Good Practice  | 35 |
| II. Areas of Weakness   | 35 |
| III. Recommendations for Follow-up Actions                                    | 35 |
| IV. Summary & Overall Assessment  | 36 |

#### PART A: BACKGROUND AND CONTEXT OF THE REVIEW

#### I. The Accreditation Panel

The Panel responsible for the Accreditation Review of the Undergraduate Study Programme (Integrated Master) of Information and Communication Systems Engineering of the University of the Aegean comprised the following three (3) members, drawn from the HQA Register, in accordance with the Law 4009/2011:

#### 1. Professor Angelos Stefanidis, (Chair)

Bournemouth University, Poole, United Kingdom

#### 2. Professor Kiki Ikossi

George Mason University, Fairfax, Virginia, USA

#### 3. Dr. Dimitris Kabilafkas

Hellenic Telecommunications Organisation, Athens, Greece

#### II. Review Procedure and Documentation

The Hellenic Quality Assurance (HQA) formed an external and independent Panel of experts for assessing the compliance of the Undergraduate Study Programme (Integrated Master) of Information and Communication Systems Engineering (ICSD) of the University of the Aegean (UA) for the purposes of granting accreditation. The visit was conducted in Karlovasi, Samos. The review process included the extensive sampling of the Department's activities for the purpose of establishing the level of compliance with the relevant Quality Assurance (QA) standards, as stipulated by the published HQA guidelines.

In the evening of Monday 2nd December 2019, the 3-member Panel arrived in Samos Aristarchos International Airport and were greeted by representatives of the Department, Prof. Spyros Kokolakis, Prof. Demosthenes Vouyioukas, Vice Rector/President of the Quality Assurance Unit (MODIP) Prof. Elena Theodoropoulou and Mr. M. Argyris. The Panel was transferred to the Aegeon Hotel in Karlovasi, Samos.

In the morning of Tuesday, December 3<sup>rd</sup> the Panel met privately to discuss the details of the accreditation process and its plans for the site visit. Later that morning, the Panel arrived at the main base of the Department, which is housed in the spacious Limperi's Building. The meetings with the students and staff took place in one of the meeting rooms:

#### Meeting with the Vice-Rector/President of MODIP and the Head of the Department

The first formal meeting was a welcome and introductory meeting with the Vice-Rector and Head of the MODIP Prof. Elena Theodoropoulou, and Assoc Prof. Demosthenes Vouyioukas, Head of the Department.

During this meeting Prof. Theodoropoulou offered background information on the University of the Aegean, its history, development, and future trajectory. Assoc Prof. Vouyioukas, gave a presentation about the Department's history, key indicators, some information pertaining to the Department, and an outline of the main scholarly activities undertaken.

#### Meeting with OMEA & MODIP representatives

Those present were the following:

Prof. Elena Theodoropoulou, Vice-rector of Academic Affairs and Student Welfare, Head of MODIP. MODIP Members: Prof. George Kormenztas, Prof. Aikaterini Klonari, Prof. Evaggelos Xideas, Assist Prof. Elina Tragou, and the MODIP staff Michael Bakas. In addition, from the Departmental OMEA the following were present: Assoc Prof. Demosthenes Vouyioukas, Head of the Department; Assoc Prof. Spyros Kokolakis; Assist Prof. Emmanouil Kalligeros; Assist Prof. Dimitris Skoutas; Christina Theocharopoulou, Support Teaching Staff (EDIP); Theodore Leoutsakos, (EDIP) and Mr. Zlatinis (student).

The MODIP and OMEA representatives provided a detailed presentation which covered the entire spectrum of the MODIP and OMEA activities. Subsequently, there was a discussion around some of the areas of work which were highlighted in the presentation. In addition to the MODIP and OMEA members who were physically present at the meeting, a number of other colleagues joined the meeting via teleconference from different locations of the University of the Aegean.

On Wednesday December 4<sup>th</sup>2019, the AP held a full day of meetings as follows:

#### Meeting with teaching staff

The following faculty members were present: Prof. Lilian Mitrou, Prof. Euripides Loukis, Assoc Prof. Yannis Charalabidis, Assoc Prof. Maria Karyda, Assoc Prof. Akrivi Vlachou, Assist Prof. Christos Goumopoulos, Assist Prof. Asimakis Leros, and specialist teaching staff (EDIP): Sia Douma and George Chrysoloras.

The meeting covered a comprehensive discussion regarding the teaching and research activities of the academic staff, in relation to the accreditation process. A subsequent discussion examined the way in which Department ensures that its teaching and research adheres to high quality standards while it satisfies the aspirations of its students and staff, and their development as part of constantly changing academic with significant external influences.

#### Meeting with students

During this meeting the students expressed their satisfaction with their overall experience as students of the Department. Part of the discussion with the students focused on the campus facilities available, the lab infrastructure which supports the general teaching but also research, and the 'identity' that the students have as members of the wider academic community within an institution which is scattered across a number of islands. The meeting with the students was constructive and insightful and the student contributions were genuine.

#### Visiting classrooms, lecture halls, libraries, other facilities

The AP accompanied by various academic staff was able to visit the key facilities (estates) currently used by the Department and its students. They included: the under development center for teleconferencing near the old port (Provataris Building), the Library (Building X" Gianni,) the student housing, and a dedicated teaching building (housed in an ex high school building), where teaching was taking place at the time of visiting. Apart from being accompanied by Assoc Prof. Demosthenes Vouyioukas, the AP also met with the administrative staff: Mrs Irini Grammatikou, and Mr Alekos Sxoinas.

Later that afternoon the AP visited a number of dedicated labs where the majority of the teaching and research takes place. They included a well-equipped computer lab, an electronics measurement lab, and a robotics lab where research students undertake various projects.

#### Meeting with graduates

During the meeting the graduates offered their reflective views on the learning and teaching work in the Department, their evaluation of the way in which QA processes are implemented and executed, and the input they had as students into the shaping of these QA processes. Further discussions focused on issues concerning grants, student mobility, research, and career opportunities.

#### Meeting with employers and social partners

The Panel met with Mr. Alexandros Lymperis, Mayor, Municipality of West Samos and Mr. Ioannis Skoutas, Head, United Winemaking Agricultural Cooperative of Samos. Also, via teleconference link, with Mr. Manolis Elenis, Ergons Group, Mechanical Engineer; Constantinos Triantafyllos, Cosmote, Public Relations; Ioannis Georgoulakis, SoftOne Technologies SA, Head, R&D Department; Michalis Psalidas, Crowdpolicy, CEO. A final representative Prof. Emmanouil Tsesmelis, CERN, International Relations, was not able to connect but offered a written statement instead.

The meeting covered the relationship of the Department with external stakeholders from the private and the public sectors. The discussions focused on the close collaboration between the students and staff of the Department and the different external entities, such as local businesses. The perspective offered by the local authority representatives was seen as of particular value by the AP.

On Thursday 5<sup>th</sup> December, the following closing meetings were conducted:

#### Meeting with OMEA & MODIP representatives

MODIP representatives: Prof. Elena Theodoropoulou, Vice-rector of Academic Affairs and Student Welfare, Head of MODIP, Prof. George Kormenztas, Prof. Aikaterini Klonari, Prof. Evaggelos Xideas, Assist Prof. Elina Tragou, and the MODIP representative Michael Bakas. In addition, the following members of the Departmental OMEA were present: Assoc Prof. Demosthenes Vouyioukas, Head of the Department, Assoc Prof. Spyros Kokolakis, Assist Prof. Emmanouil Kalligeros, Assist Prof. Dimitris Skoutas, Christina Theocharopoulou, EDIP, Theodore Leoutsakos, EDIP. The purpose of this meeting was to cover points/findings which need further clarification as a result of the earlier discussions.

#### Closing meeting with the Vice-Rector/President of MODIP, and the Head of the Department

The Panel had a final closing meeting to report informal findings with:

Prof. Elena Theodoropoulou, Vice-rector of Academic Affairs and Student Welfare, Head of MODIP, and Assoc Prof. Demosthenes Vouyioukas, Head of the Department,

During this meeting a brief discussion of the key Panel findings was made. The Panel returned to the hotel for the preparation of this report.

### The following material, provided by ADIP and MODIP was available for the drafting of the AP's report:

- HQA\_Study Prog Presentation Nov 2019
- Quality Indicators\_UP Inf \_ Commun Syst Engineering\_17-18
- Quality Indicators\_UP Inf \_ Commun Syst Engineering\_16-17
- Quality Indicators\_UP Inf \_ Commun Syst Engineering\_15-16
- Quality Indicators\_Dept Inf \_ Commun Syst Engineering\_17-18
- Quality Indicators Dept Inf Commun Syst Engineering 16-17
- Quality Indicators Dept Inf Commun Syst Engineering 15-16
- Univ Aegean Inf Commun Syst Engineering Ext Eval Report
- Standards for Quality Assurance of Undergraduate Programmes EN
- ODIGOS PISTOPOIISIS en
- P12 Guidelines for the Accreditation Panel
- P13 MAPPING GRID
- P14\_INTEG\_Template for the Accreditation Report

#### and the following additional documentation in Greek:

- B1. Πρόταση\_Πιστοποίησης\_ΠΠΣ\_ICSD.pdf
- B2. Πολιτική Ποιότητας ICSD.pdf
- B3.1. Οδηγός Σπουδών 2018-19 ICSD GR.pdf
- B3.2. Οδηγός\_Σπουδών\_2018-19\_ICSD\_EN.pdf
- B4.1. Κανονισμός ΠΠΣ ICSD.pdf
- B4.2. Κανονισμός Εκπ Εργαστηρίων ICSD.pdf
- Β4.3. Κανονισμός Εξετάσεων ICSD.pdf
- Β4.4. Οδηγός Υλοποίησης Πρακτικής Άσκησης ICSD.pdf
- B5.1. Περιγράμματα\_Μαθημάτων\_ICSD\_GR.pdf
- B5.2. Περιγράμματα Μαθημάτων ICSD EN.pdf
- B6. Στόχοι Ποιότητας ICSD.pdf
- B7.1 Αποτελέσματα επεξεργασίας ερωτηματολογίων 2015 16 Icsd ΠΠΣ.pdf
- B7.2 Αποτελέσματα επεξεργασίας ερωτηματολογίων 2016 17 ICSD ΠΠΣ.pdf
- B7.3 Αποτελέσματα επεξεργασίας ερωτηματολογίων 2017\_18\_lcsd\_ΠΠΣ.pdf
- Β7.4 Ερωτηματολόγια\_Αξιολόγησης\_Πρακτικής\_Άσκησης\_ICSD.pdf
- Β7.5 Ερωτηματολόγιο ΜΟΔΙΠ προς φοιτητές.pdf

- Β8. Πρακτικά Συνεδρίασης ΜΟΔΙΠ\_02.04.2019\_ΜΠΕΣ.pdf
- B9.1 Δεδομένα ΟΠΕΣΠ\_ΠΠΣ\_2015\_16.pdf
- B9.2 Δεδομένα ΟΠΕΣΠ ΠΠΣ 2016 17.pdf
- B9.3 Δεδομένα ΟΠΕΣΠ\_ΠΠΣ\_2017\_18.pdf
- Β9.4 Δεδομένα ΟΠΕΣΠ ΤΜΗΜΑ 2015 16.pdf
- Β9.5 Δεδομένα ΟΠΕΣΠ\_ΤΜΗΜΑ\_2016\_17.pdf
- Β9.6 Δεδομένα ΟΠΕΣΠ\_ΤΜΗΜΑ\_2017\_18.pdf
- B10.1. Integrated master\_Ειδικοί όροι.pdf
- B10.2. Πίνακας μαθημάτων.pdf
- B11.1. ALUMNI\_ICSD\_2019.pdf
- B11.2. Στρατηγικό\_Σχέδιο\_ICSD\_2019-2023.pdf
- B11.3. Ανάλυση\_SWOT\_ICSD.pdf

In addition, the Department made available to the AP the PowerPoint presentations used by the MODIP and OMEA members with all the supporting documentation.

#### **III.** Study Programme Profile

The Department of Information and Communication Systems (ICSD) was founded in November 1997. The Greek government Gazette (Issue 223/A/1997) established ICSD officially. The purpose of the new Department was to create an information and communication systems specialisation. Initially the Department offered its undergraduate programme as a 4-year degree. In June 2002, the programme became a 5-year Engineering programme -Department of Information and Communication Systems Engineering. In 2009, the supreme council of Greek Education (SAPE), established the Polytechnic School (Engineering) at the University of the Aegean, and in 2017 ICSD became a Department under the auspices of the Polytechnic School (Engineering) of the University of the Aegean. Its graduates are accepted as members of the Technical Chamber of Greece (TEE-TCG).

The Department has been active for 22 years and enjoys an internationally respectable and reputable position in the academic world of Information and Communication Systems Engineering. Since 1997, approximately 667 students have completed their Diploma degrees, with an additional 528 students obtaining Master's degrees. An impressive number of 77 students have received Ph.D. degrees.

By 2019, 1349 undergraduate students, 271 postgraduate students and 81 doctoral candidates were studying at the Department. A total of 79 courses (modules) are on offer. The duration of study for the Polytechnic School (minimum) is intended to be 5 years but the mean time to graduation stands at 6.42 years. The average graduation grade is 7.18 out of 10. There is a total of 22 faculty members, 9 full professors, 7 associate professors, 6 assistant professors, inclusive of the Head of the Department. There are 3 administrative staff, 3 EDIP members and 1 EDIP member dedicated to the polytechnic school (engineering) and 1 school of Science EPP. The Department has an active Alumni group.

The first 3 years (6 semesters) of study are dedicated to building foundational engineering knowledge. An additional one and a half years (3 semesters) are dedicated to more specialist study which is offered as part of 6 distinct thematic groupings (cycles). The last semester is taken up by the diploma research and thesis.

The Department ensures the development of practical skills and an analytical and conceptual problem-solving approach for its students, by supplementing the majority of the courses offered with extensive laboratory work. In addition, it offers practical training (Internship) and requires a mandatory thesis (project) as a condition for graduating. There are 6 research labs/groups: Information & Communication Systems Security Laboratory, Information Systems Laboratory, Artificial Intelligence Laboratory, Computer and Communication Systems Laboratory, Database Laboratory, Geometry, and Dynamical Systems & Cosmology Research Group. The research labs offer the students the opportunity to be involved with state-of-the-art research during their studies. Although ICSD runs independently, in some cases it collaborates with other University departments, which include various graduate programmes, a Doctoral Programme, and Summer School Programmes.

A large number of undergraduate students are exposed to professional work through internships with industry. To a lesser extent, students take up study abroad opportunities through an established Erasmus+ programme.

The Department is located in Karlovasi, Samos, in a picturesque Greek town by the blue Aegean Sea surrounded by green forested mountains with about 6,000 inhabitants. Karlovasi has an old town with a port, a mid-town and a new town. The Department has buildings in all 3 parts of the town. There are buildings which are dedicated to teaching, some have conference rooms with state-of-the-art teleconferencing connections, and some are historic buildings of neoclassical architecture, fully remodeled with library and other facilities. Newly constructed en-suite student housing is fully furnished and is available to students on a means-tested basis. All students are offered free or reduced cost subsistence.

The Department fosters and maintains strong relationships with business and industry. Its attractiveness is partly evidenced by its popularity as expressed by new university applicants who specify (89% in 2019) ICSD as their first choice at the national entrance examinations. The high quality of the academic programme, offers its graduates a competitive advantage and equips them well for postgraduate studies. Ninety-one (91%) of the ICSD graduates are working full time, while 49% of the graduates find work within 3 months of graduation.

The learning environment is ideal, quiet, geographically contained, but with modern amenities which are conducive to good learning and teaching. Staff and students develop strong and lasting professional relationships. The students are highly respectful of their academic staff and the staff invest in strong pastoral work which is often at a level not normally seen in larger institutions and bigger academic communities. ICSD enjoys some of the highest graduation rates in Greece.

#### PART B: COMPLIANCE WITH THE PRINCIPLES

#### **Principle 1: Academic Unit Policy for Quality Assurance**

INSTITUTIONS SHOULD APPLY A QUALITY ASSURANCE POLICY AS PART OF THEIR STRATEGIC MANAGEMENT. THIS POLICY SHOULD EXPAND AND BE AIMED (WITH THE COLLABORATION OF EXTERNAL STAKEHOLDERS) AT ALL INSTITUTION'S AREAS OF ACTIVITY, AND PARTICULARLY AT THE FULFILMENT OF QUALITY REQUIREMENTS OF UNDERGRADUATE PROGRAMMES. THIS POLICY SHOULD BE PUBLISHED AND IMPLEMENTED BY ALL STAKEHOLDERS.

The quality assurance policy of the academic unit is in line with the Institutional policy on quality, and is included in a published statement that is implemented by all stakeholders. It focuses on the achievement of special objectives related to the quality assurance of study programmes offered by the academic unit.

The quality policy statement of the academic unit includes its commitment to implement a quality policy that will promote the academic profile and orientation of the programme, its purpose and field of study; it will realise the programme's strategic goals and it will determine the means and ways for attaining them; it will implement the appropriate quality procedures, aiming at the programme's continuous improvement.

In particular, in order to carry out this policy, the academic unit commits itself to put into practice quality procedures that will demonstrate:

- a) the suitability of the structure and organization of the curriculum;
- b) the pursuit of learning outcomes and qualifications in accordance with the European and the National Qualifications Framework for Higher Education;
- c) the promotion of the quality and effectiveness of teaching;
- d) the appropriateness of the qualifications of the teaching staff;
- e) the enhancement of the quality and quantity of the research output among faculty members of the academic unit;
- f) ways for linking teaching and research;
- g) the level of demand for qualifications acquired by graduates, in the labour market;
- h) the quality of support services such as the administrative services, the Library, and the student welfare office;
- i) the conduct of an annual review and an internal audit of the quality assurance system of the undergraduate programme(s) offered, as well as the collaboration of the Internal Evaluation Group (IEG) with the Institution's Quality Assurance Unit (QAU).

#### **Study Programme compliance**

The AP has concluded that the Department's curriculum and its learning and teaching methods, meet the expected national and international standards of academic provision in the area of ICSD.

Extensive discussions with both students and staff, but also the careful review of the documentation of the policies and procedures of the Department, have demonstrated the comparability of quality outputs, in relation to teaching and research, with departments of a similar profile and size, internationally.

The academic staff of the Department have a particularly strong research ethos which underpins their teaching. Incorporating research outputs which are normally derived from funded research projects into the teaching of the UGP (but also the Master's programmes offered by the Department), is seen as 'standard practice' for all staff. The benefits of such an approach are numerous. One such benefit is seen in the co-creation of research outputs with undergraduate students, often being cited by the current students and alumni as the reason for developing a passion for further study and research in this field. Another well-articulated benefit cited by the external stakeholders of the Department, is the cultivation of highly refined employability skills which are thought to be one of the determining factors for the high employability rate of the Department's graduates.

The annual and periodic review of the programme is predominantly managed by the Department's Study Committee, whose responsibility is to collate feedback from all relevant stakeholders, including students. The process followed is both reflective, whereby the committee examines performance indicators, student feedback from questionnaires but also other indirect avenues, observations and reflections from academic teaching staff, etc., and proactive, whereby the committee ratifies specific changes to the UGP.

The Department's Internal Evaluation Committee OMEA, alongside the University's MODIP, are collectively responsible for overseeing the quality assurance processes which the Department follows. They also ensure that the evaluation of the effectiveness of these processes is monitored closely, and it adheres to the wider institutional policies.

As one of the main QA practices, the Department engages in direct student feedback acquisition through the administration of questionnaires. OMEA acknowledged that the earlier version of the student questionnaire used at the end of each course (module) had not been well received by the students, as it was deemed to be particularly lengthy and onerous. In response to the criticism, the Department worked with MODIP to develop a more 'user friendly' feedback questionnaire and re-engaged with the students to ensure that the new version is received in a more positive way. During the meeting with the students, it was reassuring to hear that the Department actively promotes formal and informal student involvement in the evaluation process of teaching, and it proactively discusses the feedback received and the way in which it influences future action plans.

#### Panel judgement

| Principle 1: Institution Policy for Quality Assurance |   |
|---|---|
| Fully compliant                                       | Х |
| Substantially compliant                               |   |
| Partially compliant                                   |   |
| Non-compliant   |   |

#### **Panel Recommendations**

1. The Department should continue to consider ways of increasing the uptake of student feedback questionnaires to supplement the existing informal mechanisms of gathering valuable student feedback.

#### **Principle 2: Design and Approval of Programmes**

INSTITUTIONS SHOULD DEVELOP THEIR UNDERGRADUATE PROGRAMMES FOLLOWING A DEFINED WRITTEN PROCESS WHICH WILL INVOLVE THE PARTICIPANTS, INFORMATION SOURCES AND THE APPROVAL COMMITTEES FOR THE PROGRAMME. THE OBJECTIVES, THE EXPECTED LEARNING OUTCOMES, THE INTENDED PROFESSIONAL QUALIFICATIONS AND THE WAYS TO ACHIEVE THEM ARE SET OUT IN THE PROGRAMME DESIGN. THE ABOVE DETAILS AS WELL AS INFORMATION ON THE PROGRAMME'S STRUCTURE ARE PUBLISHED IN THE STUDENT GUIDE.

Academic units develop their programmes following a well-defined procedure. The academic profile and orientation of the programme, the objectives, the subject areas, the structure and organisation, the expected learning outcomes and the intended professional qualifications according to the National Qualifications Framework for Higher Education are described at this stage. The approval or revision process for programmes includes a check of compliance with the basic requirements described in the Standards, on behalf of the Institution's Quality Assurance Unit (QAU).

Furthermore, the programme design should take into consideration the following:

- the Institutional strategy
- the active participation of students
- the experience of external stakeholders from the labour market
- the smooth progression of students throughout the stages of the programme
- the anticipated student workload according to the European Credit Transfer and Accumulation System
- the option to provide work experience to the students
- the linking of teaching and research
- the relevant regulatory framework and the official procedure for the approval of the programme by the Institution.

#### **Study Programme compliance**

The overall duration of the programme of study is 5 (five) years. In each semester, there is an expectation to undertake 6 courses, building up to a total accumulation of 300 ECTS which are required for the Integrated Master's degree qualification.

The programme has been designed to cover a wide range of foundational and specialist subjects in the fields of computing and telecommunications and aims to help graduates prepare for the demands of today's IT business and industry which operate in a challenging technological economic environment.

The number of courses which are required for the degree is 54, while the overall number of courses offered are 80. There is also an option for up to 3 free elective courses from other departments. The learning outcomes of the courses are clearly defined in each case.

The distribution of courses across the different cognate areas of study cover the following: 11% of the courses focus on basic science, 36% examine computer software and hardware, 18% examine the area of signal processing and telecoms, 13% are management/business oriented

courses, with the remaining 8% focusing on computer security/privacy. The remaining courses cover general introductory subjects.

The elective courses include an optional internship, with 1 course for the elaboration of a thesis project. This is considered as one of the important ways to establish links with the industry and delivers the state-of-art characteristics of the programme. A significant number of students enroll for the internship.

The student guide provides information on the programme structure, curriculum and course content. Evidence is provided on how individual courses support the learning outcomes and contribute towards the development of soft skills.

The curriculum is well designed and is compatible with universally accepted standards in the area. Minor revisions of the programme take place annually, whereas major ones are carried out within a 'reasonable period' of time. The design of the curriculum has taken into consideration the overarching university strategy, and importantly, it has considered carefully international curriculum development guidelines by reputable professional bodies (ACM, IEEE).

Further information which informs the development of the curriculum is derived through informal consultations with employers and external stakeholders. The annual monitoring of the industrial placement (internship) offers additional input. Moreover, business professionals and graduates are invited to offer guest lectures, enhancing further the externality of the curriculum.

Underpinning many of the annual review efforts is the collection of student feedback through the administration of course evaluation questionnaires. All this information is forwarded to the Study Committee for further refinement. The committee develops a recommendation to the Department General Assembly for the ratification of any recommendations.

Alumni and other external stakeholders, are seen as a significant source of information, feeding into the design and updating of the programme.

#### Panel judgement

| Principle 2: Design and Approval of Programmes |   |
|--|---|
| Fully compliant                                | Х |
| Substantially compliant                        |   |
| Partially compliant                            |   |
| Non-compliant                                  |   |

| The Accreditation Panel agrees that this Programme leads to a Level 7 Qualification according to the National & | YES | NO* |
|---|-----|-----|
|   | Х   |     |
| European Qualifications Network (Integrated Master)   |     |     |

<sup>\*</sup>In case of negative judgement, please justify

#### **Panel Recommendations**

- 1. The Department could consider the expansion of internship to the point of making it mandatory.
- 2. The Department should consider the benefit of setting up an External Advisory Board, covering all aspects of the curriculum, to further support towards the existing relationship with industry.

#### Principle 3: Student-centred Learning, Teaching and Assessment

INSTITUTIONS SHOULD ENSURE THAT THE UNDERGRADUATE PROGRAMMES ARE DELIVERED IN A WAY THAT ENCOURAGES STUDENTS TO TAKE AN ACTIVE ROLE IN CREATING THE LEARNING PROCESS. THE ASSESSMENT METHODS SHOULD REFLECT THIS APPROACH.

Student-centred learning and teaching plays an important role in stimulating students' motivation, self-reflection and engagement in the learning process. The above entail continuous consideration of the programme's delivery and the assessment of the related outcomes.

The student-centred learning and teaching process

- respects and attends to the diversity of students and their needs, enabling flexible learning paths;
- considers and uses different modes of delivery, where appropriate;
- flexibly uses a variety of pedagogical methods;
- regularly evaluates and adjusts the modes of delivery and pedagogical methods aiming at improvement;
- regularly evaluates the quality and effectiveness of teaching, as documented especially through student surveys;
- reinforces the student's sense of autonomy, while ensuring adequate guidance and support from the teaching staff;
- promotes mutual respect in the student teacher relationship;
- applies appropriate procedures for dealing with students' complaints.

In addition:

- the academic staff are familiar with the existing examination system and methods and are supported in developing their own skills in this field;
- the assessment criteria and methods are published in advance;
- the assessment allows students to demonstrate the extent to which the intended learning outcomes have been achieved. Students are given feedback, which, if necessary is linked to advice on the learning process;
- student assessment is conducted by more than one examiner, where possible;
- the regulations for assessment take into account mitigating circumstances;
- assessment is consistent, fairly applied to all students and carried out in accordance with the stated procedures;
- a formal procedure for student appeals is in place.

#### **Study Programme compliance**

The UGP closely follows the trends in its field and is seen as a leader in its area. The programme has been designed to address the needs of the students and maps closely to the skills expectations of the job market. The combination of information technology and communications through integrated systems has given the Department its unique identity, which is underpinned by strong technical expertise.

The teaching approach followed by ICSD is an innovative, student-centered approach with flexible learning paths. 92% of the students take advantage of the summer internships to gain

work experience before graduation. This is a positive aspect of study that gives an employability advantage to the participating students. While a 100% internship participation remains the goal for the Department, limited resources mean that internships cannot be made compulsory for all students. Some students, however, take advantage of the Erasmus+ opportunities to have a study abroad experience.

The last departmental review took place in 2013. One of the recommendations was about the integration of maths classes into the ICSD curriculum. The Department acted on that recommendation, and now key maths topics are on offer (Mathematics for Engineers I & II, Mathematical Modeling). This is seen as a benefit to the students and the overall effectiveness of the curriculum.

#### Panel judgement

| Principle 3: Student- centred Learning, Teaching and |   |
|--|---|
| Assessment   |   |
| Fully compliant                                      | Х |
| Substantially compliant                              |   |
| Partially compliant                                  |   |
| Non-compliant  |   |

#### **Panel Recommendations**

1. It would be useful to document more comprehensively the successful QA policies and processes which govern the delivery of ICSD, to ensure that they are easily accessible and traceable by both students and staff.

#### Principle 4: Student Admission, Progression, Recognition and Certification

INSTITUTIONS SHOULD DEVELOP AND APPLY PUBLISHED REGULATIONS COVERING ALL ASPECTS AND PHASES OF STUDIES (ADMISSION, PROGRESSION, RECOGNITION AND CERTIFICATION).

Institutions and academic units need to put in place both processes and tools to collect, manage and act on information regarding student progression.

Procedures concerning the award and recognition of higher education degrees, the duration of studies, rules ensuring students progression, terms and conditions for student mobility should be based on the institutional study regulations. Appropriate recognition procedures rely on institutional practice for recognition of credits among various European academic departments and Institutions, in line with the principles of the Lisbon Recognition Convention.

Graduation represents the culmination of the students'study period. Students need to receive documentation explaining the qualification gained, including achieved learning outcomes and the context, level, content and status of the studies that were pursued and successfully completed (Diploma Supplement).

#### **Study Programme compliance**

University applicants gain admittance to ICSD through the national examinations system for admission to higher education in Greece. ICSD applicants follow the technology and science pathway, and hence benefit from a common and relatively strong background in maths and physics.

The annual size of the student cohort is determined by the Ministry of Education and does not necessarily reflect the optimum intake number deemed by the Department which carefully considers the available resources. However, the final student intake number fluctuates following intra-university transfers, as well as no-shows.

The Department has introduced a comprehensive induction session for its new students. Part of the induction covers the necessary administrative arrangements for new students, a detailed introduction to study programme, the wider Department and its research and teaching activities, as well as pastoral care and support facilities available to students. Comprehensive guides are provided on the website. Specifically, the student guide, available in Greek and English, provides a detailed description of the courses offered, including information on learning outcomes, syllabi, bibliography and assessment strategies. Students receive detailed documentation explaining learning outcomes, context, level, and the overall content of studies.

Students are offered the opportunity to undertake practical training (industrial training) in the  $4^{th}$  year, usually during the summer. This is normally financed by ESNA/NSRF, and although the training is not compulsory, the uptake is significant with positive results regarding the student experience but also reputational standing of ICSD.

The submission of a thesis is required as part of the last semester of study and is worth 30 ECTS. Its purpose is to exemplify the research skills of graduates. A transparent and fair process is followed for the allocation of the potential topics and supervisors.

ICSD graduands are issued award certificates in Greek and in English, including an academic transcript which lists their achievements in detail. Prizes are offered for certain achievements, such as obtaining high degree classifications and completing the programme of study promptly.

#### Panel judgement

| Principle 4: Student Admission, Progression, Recognition and Certification |   |
|--|---|
| Fully compliant  | Х |
| Substantially compliant  |   |
| Partially compliant  |   |
| Non-compliant  |   |

#### **Panel Recommendations**

- 1. Expanding the industrial training element of study should be maintained as a priority and additional resources should be sought to support it further, where possible.
- 2. The Department is encouraged to continue to pursue ways of improving the number of Erasmus+ opportunities for its students.

#### **Principle 5: Teaching Staff**

INSTITUTIONS SHOULD ASSURE THEMSELVES OF THE QUALIFICATIONS AND COMPETENCE OF THE TEACHING STAFF. THEY SHOULD APPLY FAIR AND TRANSPARENT PROCESSES FOR THE RECRUITMENT AND DEVELOPMENT OF THE TEACHING STAFF.

The Institutions and their academic units have a major responsibility as to the standard of their teaching staff providing them with a supportive environment that promotes the advancement of their scientific work. In particular, the academic unit should:

- set up and follow clear, transparent and fair processes for the recruitment of properly qualified staff and offer them conditions of employment that recognize the importance of teaching and research;
- offer opportunities and promote the professional development of the teaching staff;
- encourage scholarly activity to strengthen the link between education and research;
- encourage innovation in teaching methods and the use of new technologies;
- promote the increase of the volume and quality of the research output within the academic unit;
- follow quality assurance processes for all staff members (with respect to attendance requirements, performance, self-assessment, training etc.);
- develop policies to attract highly qualified academic staff;

#### **Study Programme compliance**

The hiring of the teaching staff is well documented in the Greek legislation. The prospective staff are evaluated by external committees before they are hired. The ICSD faculty are in general highly qualified with internationally recognised expertise in their respective fields.

The ICSD teaching staff the AP met with, demonstrated great awareness of the resources needed for the pursuit of scholarly activities. They also demonstrated the good use of those facilities which underpin their comprehensive achievements in learning, teaching, and research. The average teaching load is about 7.6 hours per week. All course materials are available online. The AP's discussions with the academic staff confirmed their enthusiastic approach to teaching, and their commitment to staying on top of developments in the field by regularly updating teaching materials to ensure the robust delivery of advanced technical knowledge to the students.

It is notable that despite the high student to staff ratio, the students expressed their strong satisfaction with the personalised level of attention they receive from staff. Conversely, staff expressed satisfaction with their interactions with the students and the general level of student engagement.

Staff are careful to take advantage of the existing opportunities like Erasmus+, sabbatical leave, and opportunities for collaboration not only within the Department but nationally and internationally.

Academic staff reported that the department has always been able to support presenting research work at academic conferences. The documentation available shows that the research activity within the Department and the level of research co-creating with students is very good.

Opportunities for career advancement and promotion are well known to staff, as is the governing legislation which determines internal promotions and 'external' movement of academic staff.

#### Panel judgement

| Principle 5: Teaching Staff |   |
|-----------------------------|---|
| Fully compliant             | Х |
| Substantially compliant     |   |
| Partially compliant         |   |
| Non-compliant               |   |

#### **Panel Recommendations**

1. The Department is encouraged to continue to pursue additional posts to sustain the high quality output of its work and pursue its future growth plans.

#### **Principle 6: Learning Resources and Student Support**

INSTITUTIONS SHOULD HAVE ADEQUATE FUNDING TO COVER TEACHING AND LEARNING NEEDS. THEY SHOULD -ON THE ONE HAND- PROVIDE SATISFACTORY INFRASTRUCTURE AND SERVICES FOR LEARNING AND STUDENT SUPPORT AND-ON THE OTHER HAND- FACILITATE DIRECT ACCESS TO THEM BY ESTABLISHING INTERNAL RULES TO THIS END (E.G. LECTURE ROOMS, LABORATORIES, LIBRARIES, NETWORKS, BOARDING, CAREER AND SOCIAL POLICY SERVICES ETC.).

Institutions and their academic units must have sufficient funding and means to support learning and academic activity in general, so that they can offer to students the best possible level of studies. The above means could include facilities such as libraries, study rooms, educational and scientific equipment, information and communications services, support or counselling services.

When allocating the available resources, the needs of all students must be taken into consideration (e.g. whether they are full-time or part-time students, employed or international students, students with disabilities) and the shift towards student-centred learning and the adoption of flexible modes of learning and teaching. Support activities and facilities may be organised in various ways, depending on the institutional context. However, the internal quality assurance ensures that all resources are appropriate, adequate, and accessible, and that students are informed about the services available to them.

In delivering support services the role of support and administrative staff is crucial and therefore they need to be qualified and have opportunities to develop their competences.

#### **Study Programme compliance**

The AP was offered the opportunity to visit all the facilities utilised by the Department, including the:

- Hatzigianneio library building in Neo Karlovasi
- halls of residence
- teleconference suit in Limani (Provataris Building)
- main teaching facilities (main lecture theatre) in Meseo Karlovasi
- Limperi teaching and research labs, Neo Karlovasi

Staff and students commented on the quality and quantity of facilities available for teaching and research purposes. Part of the discussion, however, focused on the geographical distribution of the buildings across the different areas of Karlovasi and the ease of access they offer, in particular in relation to timetabling constraints that students may have.

The AP noted the good quality and adequate number of facilities which are dedicated to supporting the study programmes of the Department, while acknowledging the limitations which the institution is facing in terms of development of its estate both in Samos but also the

other islands. Teaching and research equipment in the classrooms and laboratories is of good quality. The lecture rooms and teaching / research labs are equipped with the expected audiovisual facilities, fast Internet connection, and teleconferencing opportunities.

The various buildings used by the Department, and in some cases the other two departments which are co-located in Karlovasi, are either owned by or leased to the University. Discussions with the local stakeholders and the municipal government of Karlovasi, demonstrated a clear commitment to continue developing the estate portfolio of the institution by investing in the acquisition of new and the upgrading of existing buildings. Academic staff offices and the general administration office are co-located in the main in the Limperi building, acting as a focal point for the interaction between students and the Department.

The AP is pleased to note that there is a good student accommodation provision in the form of 155 rooms in the halls of residence, and subsidised subsistence support. Even though the provision in these areas is not universal, it has been designed to support students whose financial means are limited. It is also encouraging to note that the institution is actively looking to expand the provision of its halls of residence, making students accommodation more affordable for an even larger number of students.

It is commendable that the Department is actively involved with the local community in expanding the department buildings and facilities. The Panel feels confident that the new facilities will help the department grow.

#### Panel judgement

| Principle 6: Learning Resources and Student Support |   |
|---|---|
| Fully compliant                                     | Х |
| Substantially compliant                             |   |
| Partially compliant                                 |   |
| Non-compliant                                       |   |

#### **Panel Recommendations**

1. The planning and development of new buildings and facilities should carefully consider the provision for people with disabilities.

#### **Principle 7: Information Management**

INSTITUTIONS BEAR FULL RESPONSIBILITY FOR COLLECTING, ANALYSING AND USING INFORMATION, AIMED AT THE EFFICIENT MANAGEMENT OF UNDERGRADUATE PROGRAMMES OF STUDY AND RELATED ACTIVITIES, IN AN INTEGRATED, EFFECTIVE AND EASILY ACCESSIBLE WAY.

Institutions are expected to establish and operate an information system for the management and monitoring of data concerning students, teaching staff, course structure and organisation, teaching and provision of services to students as well as to the academic community.

Reliable data is essential for accurate information and for decision making, as well as for identifying areas of smooth operation and areas for improvement. Effective procedures for collecting and analysing information on study programmes and other activities feed data into the internal system of quality assurance.

The information gathered depends, to some extent, on the type and mission of the Institution. The following are of interest:

- key performance indicators
- student population profile
- student progression, success and drop-out rates
- student satisfaction with their programme(s)
- availability of learning resources and student support
- career paths of graduates

A number of methods may be used for collecting information. It is important that students and staff are involved in providing and analyzing information and planning follow-up activities.

#### **Study Programme compliance**

The Department maintains a large array of information systems to support its operational needs and those of its students in the best possible way:

- ICARUS (Σύστημα Ενημέρωσης Φοιτητών Διδασκόντων)
- Φοιτητολόγιο Τμήματος (τοπική εφαρμογή)
- e-Class (Σύστημα Διαχείρισης Ηλεκτρονικών Μαθημάτων)
- Octopus (Π.Σ. Διαχείρισης Ερευνητικού Διδακτικού Έργου)
- CRMS (Εφαρμογή Διαχείρισης Κοινών Πόρων)
- ΜΟΔΙΠ (Μονάδα Διασφάλισης Ποιότητας)

Both staff and students spoke with a sense of pride about the level of the available IT infrastructure and the ease with which the relevant information can be located and retrieved. Institutionally, the University provides the wider IT infrastructure which supports the collection of data which underpins the publication regular but also annual reports, many of which are posted on the institution's website for public access.

The Department devotes noteworthy resources to analysing all aspects of information which enable it to ascertain the level of progress made against departmental and institutional targets. There are good examples where careful analysis of the data shows trends in terms of student performance. Equally, there are significant efforts to model underpinning factors which affect the overall student attainment, alongside possible mitigating circumstances.

In a similar manner, the recent initiative to launch a platform which would enable the registration of alumni, has attracted noticeable interest.

#### Panel judgement

| Principle 7: Information Management |   |
|-------------------------------------|---|
| Fully compliant                     | Х |
| Substantially compliant             |   |
| Partially compliant                 |   |
| Non-compliant                       |   |

#### **Panel Recommendations**

None

#### **Principle 8: Public Information**

INSTITUTIONS SHOULD PUBLISH INFORMATION ABOUT THEIR TEACHING AND ACADEMIC ACTIVITIES WHICH IS CLEAR, ACCURATE, OBJECTIVE, UP-TO-DATE AND READILY ACCESSIBLE.

Information on Institution's activities is useful for prospective and current students, graduates, other stakeholders and the public.

Therefore, institutions and their academic units provide information about their activities, including the programmes they offer, the intended learning outcomes, the qualifications awarded, the teaching, learning and assessment procedures used, the pass rates and the learning opportunities available to their students, as well as graduate employment information.

#### **Study Programme compliance**

The academic and educational content of the Department, as well as, information about activities in conjunction with various university wide services of interest, are made available to the public mainly through the departmental and university websites. Information of promotional and general descriptive nature about the University is also provided in printed form.

The departmental website carries comprehensive information about all useful aspects related to the UGP, including:

- the student guide for all 3 levels of studies, including course descriptions and syllabi
- (research) lab description with information about the contributing staff and the projects undertaken (mainly in English)
- information and access to the web services of the Department
- news, events, and the academic calendar
- QA policy, evaluation reports and related data, including results about the employability of recent graduates
- Erasmus+ and the alumni network
- information about more general or student-initiated activities, including the student union, and various cultural, sport or general activities
- general information about the town and its surroundings

Each of the above categories contains detailed information for interested users and is complemented by the university website in terms of rules, regulations, policies, and guides which may be applicable to the Department.

The departmental website is logically organised and exists both Greek and English. The English version was found to be less comprehensive, and although it does contain all the important material, it does not duplicate all the information found on the Greek version of the website.

#### Panel judgement

| Principle 8: Public Information |   |
|---------------------------------|---|
| Fully compliant                 | X |
| Substantially compliant         |   |
| Partially compliant             |   |
| Non-compliant                   |   |

#### **Panel Recommendations**

1. Improve the English version of the website to ensure it fully mirrors the wealth of content currently found on the Greek version of the website.

#### **Principle 9: On-going Monitoring and Periodic Internal Review of Programmes**

INSTITUTIONS SHOULD HAVE IN PLACE AN INTERNAL QUALITY ASSURANCE SYSTEM FOR THE AUDIT AND ANNUAL INTERNAL REVIEW OF THEIR PROGRAMMES, SO AS TO ACHIEVE THE OBJECTIVES SET FOR THEM, THROUGH MONITORING AND AMENDMENTS, WITH A VIEW TO CONTINUOUS IMPROVEMENT. ANY ACTIONS TAKEN IN THE ABOVE CONTEXT SHOULD BE COMMUNICATED TO ALL PARTIES CONCERNED.

Regular monitoring, review and revision of study programmes aim to maintain the level of educational provision and to create a supportive and effective learning environment for students.

The above comprise the evaluation of:

- the content of the programme in the light of the latest research in the given discipline, thus ensuring that the programme is up to date;
- the changing needs of society;
- the students' workload, progression and completion;
- the effectiveness of the procedures for the assessment of students;
- the students' expectations, needs and satisfaction in relation to the programme;
- the learning environment, support services and their fitness for purpose for the programme

Programmes are reviewed and revised regularly involving students and other stakeholders. The information collected is analysed and the programme is adapted to ensure that it is up-to-date. Revised programme specifications are published.

#### **Study Programme compliance**

The Department explained that the UGP is reviewed and revised regularly, using both a bottom up and top down approach for implementing revisions and modifications.

The bottom up approach involves the utilisation of the Study Committee for changes such as adding material or revising the schedule of courses, whereas the top down approach normally covers major changes to the curriculum using a separate committee specifically drawn for this purpose.

As part of its continuing cycle of work, the Department monitors, evaluates and revises the UGP by taking into account international standards in computing, engineering, and information systems, ACM / IEEE / AIS.

The report refers specifically to the earlier 2013 external evaluation where committees were formed to assess the evaluation and develop an action plan. With that respect, the process worked well since the major recommendations for the programme were successfully modified and new aspects of the programme were implemented. For example, the flexibility of the student study programme with the implementation of the 6 cycles of elective discipline areas and the introduction of Math for Engineers courses.

There is an obvious success in using external assessment for changes in the programme. However, the committee finds that it is not clear how internal assessments, like the student evaluations are used and if a formal process exists for the input from stakeholders, evaluation of their recommendations and integration with the programme. The system works well on what appears to be personal interactions from a very dedicated faculty body, enthusiastic students and stakeholders. This is a very unique phenomenon that reflects very positively on the

comradery of the ICSD and the University of the Aegean with the local communities and international research centers. Nevertheless, a formal process needs to be implemented to ensure continued success. (Like formal meetings of an advisory board with action plans).

#### Panel judgement

| Principle 9: On-going Monitoring and Periodic Internal Review of Programmes |   |
|---|---|
| Fully compliant   |   |
| Substantially compliant   | Х |
| Partially compliant   |   |
| Non-compliant   |   |

#### **Panel Recommendations**

1. The Department is encouraged to continue reviewing its study programmes and quality outputs regularly and engage more actively the involvement of the external stakeholder group with the review process.

#### **Principle 10: Regular External Evaluation of Undergraduate Programmes**

PROGRAMMES SHOULD REGULARLY UNDERGO EVALUATION BY COMMITTEES OF EXTERNAL EXPERTS SET BY THE HQA, AIMING AT ACCREDITATION. THE TERM OF VALIDITY OF THE ACCREDITATION IS DETERMINED BY HQA.

HQA is responsible for administrating the programme accreditation process which is realised as an external evaluation procedure, and implemented by a committee of independent experts. HQA grants accreditation of programmes, with a specific term of validity, following to which revision is required. The accreditation of the quality of the programmes acts as a means of verification of the compliance of the programme with the template's requirements, and as a catalyst for improvement, while opening new perspectives towards the international standing of the awarded degrees.

Both academic units and institutions participate in the regular external quality assurance process, while respecting the requirements of the legislative framework in which they operate.

The quality assurance, in this case the accreditation, is an on-going process that does not end with the external feedback, or report or its follow-up process within the Institution. Therefore, Institutions and their academic units ensure that the progress made since the last external quality assurance activity is taken into consideration when preparing for the next one.

#### **Study Programme compliance**

The previous external evaluation of the Department by HQA took place in December 2013 and the results were circulated in early 2014. The departmental accreditation and the institutional audit reports are available on the web. No other external review was contacted thereafter.

A 4-member committee was set up for the purpose of taking forward the previous evaluation report outcomes, and its recommendations were mainly focused on:

- revising the workload and introducing (academic) specialisation cycles to provide more specialist focus
- safeguarding the status of graduates in relation to Technical Chamber of Greece (TEE) membership
- exploring synergies with the Mathematics Department in providing additional educational competence
- enriching of the website with teaching and research material
- devising a strategic plan under study or implementation for development of building and e-learning infrastructure

#### Panel judgement

| Principle 10: Regular External Evaluation of Undergraduate Programmes |   |  |
|---|---|--|
| Fully compliant   | Х |  |
| Substantially compliant   |   |  |
| Partially compliant   |   |  |
| Non-compliant   |   |  |

#### **Panel Recommendations**

None

#### **Part C: Conclusions**

#### I. Features of Good Practice

- ICSD features strong academic content and is of comparable quality to other national and international programmes.
- The ICSD programme has been designed to challenge students, differentiate between those who do well and those excel, and offer good learning opportunities to all.
- The strong employability skills embedded within the ICSD curriculum and the close working relationship with the wider stakeholder community, provide a great learning experience to students.
- The Department places great emphasis on student-centred learning and teaching.
- There is clear evidence of supporting students throughout their learning using a variety of different approaches.
- The QA processes of the Department and the wider institution are fully utilised for the benefit of the students and staff.
- Research and the ethos of research co-creation with students is strong in the Department.
- The teaching and research facilities are good and ample. Continuous improvements are being made, with new facilities becoming available all the time.
- Pastoral care and attention to students' needs is exemplary. Staff give their time freely
  and students are highly appreciative of the support they receive.

#### II. Areas of Weakness

The AP did not find any noticeable areas of weakness in the UGP or the overall QA processes of the Department. Funding, resources, and the wider legal framework which governs higher education remain an issue for the entire sector.

#### III. Recommendations for Follow-up Actions

- The Department should continue to consider ways of increasing the uptake of student feedback questionnaires to supplement the existing informal mechanisms of gathering valuable student feedback.
- The Department could consider the expansion of internship to the point of making it mandatory.
- The Department should consider the benefit of setting up an External Advisory Board, covering all aspects of the curriculum, to further support towards the existing relationship with industry.
- It would be useful to document more comprehensively the successful QA policies and processes which govern the delivery of ICSD, to ensure that they are easily accessible and traceable by both students and staff.

- Expanding the industrial training element of study should be maintained as a priority and additional resources should be sought to support it further, where possible.
- The Department is encouraged to continue to pursue ways of improving the number of Erasmus+ opportunities for its students.
- The Department is encouraged to continue to pursue additional posts to sustain the high-quality output of its work and pursue its future growth plans.
- The planning and development of new buildings and facilities should carefully consider the provision for people with disabilities.
- Improve the English version of the website to ensure it fully mirrors the wealth of content currently found on the Greek version of the website.
- The Department is encouraged to continue reviewing its study programmes and quality outputs regularly and engage more actively the involvement of the external stakeholder group with the review process.

#### IV. Summary & Overall Assessment

#### The Principles where full compliance has been achieved are:

- Principle 1: Academic Unit Policy for Quality Assurance
- Principle 2: Design and Approval of Programmes
- Principle 3: Student centred Learning, Teaching and Assessment
- Principle 4: Student Admission, Progression, Recognition and Certification
- Principle 5: Teaching Staff
- Principle 6: Learning Resources and Student Support
- Principle 7: Information Management
- Principle 8: Public Information
- Principle 10: Regular External Evaluation of Undergraduate Programmes

#### The Principles where substantial compliance has been achieved are:

Principle 9: On-going monitoring and Periodic Internal Review of Programmes

#### The Principles where partial compliance has been achieved are:

None

#### The Principles where failure of compliance was identified are:

None

| Overall Judgement       |   |
|-------------------------|---|
| Fully compliant         | Х |
| Substantially compliant |   |
| Partially compliant     |   |
| Non-compliant           |   |

| The Accreditation Panel agrees that this Programme leads | YES | NO |
|--|-----|----|
| to a Level 7 Qualification according to the National &   | Х   |    |
| European Qualifications Network (Integrated Master)      |     |    |

The members of the Accreditation Panel for the Undergraduate Programme Information and Communication Systems Engineering (integrated master) of the University of the Aegean

Name and Surname Signature

- Prof. Angelos Stefanidis (Chair), Bournemouth University, Poole, United Kingdom
- Prof. Kiki Ikossi, George Mason University, Fairfax, Virginia, USA
- **Dr Dimitris Kabilafkas**, Hellenic Telecommunications Organisation, Athens, Greece