

Higher Education Institution's Response

Conventional-face-to-face programme of study

Date: 13/06/2022

- **Higher Education Institution:** Frederick University
- **Campus:** Nicosia
- **School:** Engineering
- **Department / Sector:** Department of Electrical Engineering, Computer Engineering and Informatics
- **Programme(s) of study under evaluation**
Name (Duration, ECTS, Cycle)

In Greek: Διαδικτυακά και Έξυπνα Συστήματα (3 ακαδημαϊκά εξάμηνα, 90 ECTS, Master (MSc))

In English: Web and Smart Systems with specialisations: (a) Web Systems, (b) Smart Systems (3 academic semesters, 90 ECTS, Master (MSc))

Language(s) of instruction: English

Programme's Status: Currently Operating

The present document has been prepared within the framework of the authority and competencies of the Cyprus Agency of Quality Assurance and Accreditation in Higher Education, according to the provisions of the "Quality Assurance and Accreditation of Higher Education and the Establishment and Operation of an Agency on Related Matters Laws of 2015 to 2019" [N. 136 (I)/2015 to N. 35(I)/2019].



A. Guidelines on content and structure of the report

- *The Higher Education Institution (HEI) based on the External Evaluation Committee's (EEC's) evaluation report (Doc.300.3.1) must justify whether actions have been taken in improving the quality of the department in each assessment area.*
- *In particular, under each assessment area, the HEI must respond on, without changing the format of the report:*
 - *the findings, strengths, areas of improvement and recommendations of the EEC*
 - *the deficiencies noted under the quality indicators (criteria)*
 - *the conclusions and final remarks noted by the EEC*
- *The HEI's response must follow below the EEC's comments, which must be copied from the external evaluation report (Doc. 300.3.1).*
- *In case of annexes, those should be attached and sent on a separate document.*

1. Study programme and study programme's design and development (ESG 1.1, 1.2, 1.7, 1.8, 1.9)

| Sub-area | | <i>Non-compliant/ Partially Compliant/Compliant</i> |
|----------|--|---|
| 1.1 | Policy for quality assurance | Compliant |
| 1.2 | Design, approval, on-going monitoring and review | Compliant |
| 1.3 | Public information | Compliant |
| 1.4 | Information management | Compliant |

Areas of improvement and recommendations

1.a. The university should consider including at least one representative from industry in the Internal Quality Assurance Committee, to ensure that the needs of the industry are kept into consideration and regularly updated. This synergy could also have positive implications for employability of the programme graduates.

As per the University's charter, the Internal Quality Assurance Committee is comprised by the Vice Rector of Academic Affairs, one (1) Teaching and Research Staff representative from each School of the University, two (2) Teaching and Research Staff members with expertise in Quality Assurance, one (1) Administrative Staff representative and two (2) representatives from the student body (one (1) undergraduate and one (1) postgraduate). At the Departmental level, there is the Advisory board where two (2) industry professionals participate, offering their insight and specialized expertise on various topics regarding the programmes of study of the Department. The two industry professionals that participate in the Advisory board are:

- Mr. Panayiotis Philimis, Founder and CEO of CyRIC - Cyprus Research and Innovation Center.
- Mr. George Malekkos, CEO & Software Innovation Architect of Powersoft.

Furthermore, as per the University's regulations, when reviewing the programmes of study, feedback from relevant industry professionals, as well as feedback from the Professional Bodies (ex. Cyprus Scientific and Technical Chamber (ETEK)), is taken into consideration in order to ensure that the programmes under revision, are updated with the latest bibliographical references and technology trends regarding their fields of study.



Additionally, the programme of study “Web and Smart Systems” often invites industry professionals as guest speakers to provide lectures and enrich the programme with their specialized knowledge and expertise. Find below a list of invited speakers delivered a talk at the Frederick University as well as some planned talks that will be offered in the near future:

- Mr. Loizos Tofas, Founder and CEO of T. C. Geomatic LTD, “Geographic Information Systems”.
- Dr. Costa Constantinos, Data Management Systems Lab, “Spatial Big Data Management”.
- Dr. Kleanthis Neokleous, Silversky3D Virtual Reality Technologies Ltd. “Cognitive and clinical training with Virtual Reality Technologies”.
- Dr. Andreas Pamporis, Jarvic, “Adaptive Wearables Applications”.
- Mr. Alexandros Andreou, Creative Director Silversky3D, “A Shallow Dive Into VR

The courses of the programme, often contain case studies, or require student to collaborate with external industry stakeholder in order to fulfil an assignment or present a project proposal. For example,

- MSc student Stylianos Georgiou collaborated with Materia Group in the project Guided to develop an Augmented Reality smartphone application during the WSS589/WSS590 courses.
- MSc student Michalis Hadjidemetriou collaborated with VIPS taxi for the development of an Android application during the WSS503 course.
- MSc student Elias Kokkinos collaborated with the Municipality of Aglatzia in the project SaveOurFood to develop an Android application and a web platform during the WSS551 course.
- MSc student Michalis Massalas collaborated with IBSCY in the project CrodaGator: Crowdsourcing Aggregator to develop a web system during the WSS589/WSS590 courses.

Finally, the programme students are also provided the opportunity to come in contact with employers from the industry via the events that the University organizes, such as the Career Fair ([Link](#)). At the Career fair organized at the 19th of May 2022, students had the opportunity to come in contact and exchange information with more than 30 possible employers from the industry.



- 1.b. The Programme team should consider extending the choice of elective courses to give more choice to students to pick the desired direction of specialisation.

We accept and adopt the recommendation by the External Evaluation Committee.

The choice of elective courses for each specialization is expanded as shown in Annex 1 – Programme Structure, and Annex 2 – Course Descriptions. With this change in the Programme structure, students have to choose two courses out of five elective courses for each specialization (a total of ten elective courses for the Programme).

2. Student – centred learning, teaching and assessment

(ESG 1.3)

| Sub-area | | <i>Non-compliant/ Partially Compliant/Compliant</i> |
|----------|---|---|
| 2.1 | Process of teaching and learning and student-centred teaching methodology | Compliant |
| 2.2 | Practical training | Compliant |
| 2.3 | Student assessment | Compliant |

Areas of improvement and recommendations

2.a. Greater clarity on how research is linked to teaching beyond the research informed descriptions of many study guides, particularly with regards to how students benefit directly from staff involvement in research activities.

The Department promotes the participation of postgraduate students in research projects through their Thesis, where the topic of the Thesis is related to the research work of their Thesis advisors. In the table below, examples of thesis work directly related to the Advisor's research work is provided. The name of the student, the thesis title and the name of the advisor(s) are listed.

Table 1 Student Participation in Research Projects

| STUDENT | THESIS TITLE | ADVISOR(S) |
|--------------------|---|---|
| Rafael Alexandrou | Indoor Localization with Machine Learning | Dr Andreas Constantinides and Dr Harris Papadopoulos |
| Adrian Radu Runcan | A Generic Dynamic Routing Scheme for Network on Chip | Dr Chysostomos Chrysostomou and Dr Konstantinos Tatas |
| Ahmad Al-Zoubi | Mapping and Scheduling of OpenCL Workloads on Emerging Technologies | Dr Konstantinos Tatas |



| STUDENT | THESIS TITLE | ADVISOR(S) |
|------------------------|---|--|
| Michalis Massalas | Multi-Objective Optimization for Indoor Localization on Smartphones | Dr Andreas Constantinides |
| Aphrodite Demetriades | “CrODA-Gator”: A Crowdsourcing-based service for collecting, managing and mapping mobile data | Dr Andreas Constantinides |
| Christoforos Kronis | A Social Business Intelligence Platform for Smart Media Planning | Dr Andreas Constantinides and Dr Harris Papadopoulos |
| Nestoras Georgiou | Detecting Android Malware with Machine Learning Techniques | Dr Andreas Constantinides and Dr Harris Papadopoulos |
| Marios Andreou | Twitter Trending Topics Classification | Dr Harris Papadopoulos |
| Nasia Theodorou | Autonomous IoT – based Fire Detection and Prevention System | Dr Constantinos Tatas |
| Gioulianna Kalaitzidou | A Web-Based Health Platform for Speech and Language Pathologists | Dr Achilleas Achilleos |
| Ioannis Giorkas | Requirements Analysis and Evaluation of Smart City Platforms | Dr Achilleas Achilleos |
| Kyriakos Michael | A Non-Immersive Virtual Reality Web Framework for Restaurant Reservation Services (VRWF-RRS) | Dr Achilleas Achilleos |
| Erma Dymiotou | A Smart Personnel Management System for Businesses | Dr Achilleas Achilleos |
| Iasonas Iasonos | CloudScanner: An Automated Cloud Deployment Environment | Dr Achilleas Achilleos |

Moreover, a number of publications (conferences and journals) have resulted from the Master thesis work undertaken by the students demonstrating the research nature of the conducted work. Below we provide an indicative list of these publications:

- a) Nader Nader, Rafael Alexandrou, Andreas Pamporis, Harris Papadopoulos and Andreas Konstantinidis, "Smart Out-of-Home Advertising Using Artificial Intelligence and GIS Data", 36th AAAI Conference on Artificial Intelligence, March 2022.
- b) Achilleas Achilleos, Michalis Makrominas, Christos Markides, Rafael Alexandrou, Andreas Konstantinidis, Elena Papacosta, Panos Constantinides, Effie Zikouli and Leondios Tselepos, "Promoting active sports tourism through technology and evaluating its economic impact: experiences from Cyprus, Taylor & Francis, Journal of Sport & Tourism, (2021)
- c) Achilleas Achilleos, Andreas Konstantinidis, Rafael Alexandrou, Christos Markides, Effie Zikouli, George Papadopoulos, "A Web Platform and a Context Aware Recommender System for Active Sport Events", 21st International Conference on Innovations for Community Services, I4CS 2021, May 26 - 28, Bamberg, Germany, 2021.
- d) K. Tatas, A. Al-Zoubi, D. Zolotareva and A. Antoniou, "iPONICS: IoT Monitoring and Control for Hydroponics", in Proceedings of the 10th International Conference on Circuits and Systems Technologies (MOCAST 2021), Thessaloniki, Greece, 5-7 July, 2021.
- e) R. Alexandrou, H. Papadopoulos, A. Konstantinidis. "Indoor Localization with Multi-objective Selection of Radiomap Models". In Proceedings of the 16th IFIP International Conference on Artificial Intelligence Applications and Innovations (AIAI 2020). IFIP AICT 583, pp. 267-278. Springer, 2020
- f) Ahmad Al-Zoubi, Konstantinos Tatas and Costas Kyriacou, "Fuzzy classification of OpenCL programs targeting heterogeneous systems" , Journal of Intelligent & Fuzzy Systems, vol. 39, no. 5, pp. 7189-7202 IOS Press, November 2020
- g) Achilleas Achilleos, Christos Markides, Michalis Makrominas, Andreas Konstantinides, Rafael Alexandrou, Effie Zikouli, Elena Papacosta, Panos Constantinides and Leondios Tselepos, "Evaluating the Economic Impact of Active Sports Tourism Events: Lessons Learned from Cyprus", 7th International Conference of the International Association of Cultural and Digital Tourism (IACuDiT), Springer Proceedings, Culture and Tourism in a Smart, Globalized and Sustainable World, Hydra, 2-4 September, 2020.



- h) Al-Zoubi and K. Tatas, "Rapid High-Level FPGA Resource Estimation for a Novel Heterogeneous Platform Scheduling Scheme", Proc of 11th International Conference on Information and Communication Systems (ICICS 2020), April 7-9, 2020, Irbid, Jordan
- i) Rafael Alexandrou, Harris Papadopoulos, Andreas Konstantinidis, "Smartphone Indoor Localization using Bio-Inspired Modeling" , Nature-Inspired Computation in Navigation and Routing Problems, Springer, 2019
- j) Andreas Konstantinidis, Aphrodite Demetriades and Savvas Pericleous, "A Mult-Objective Indoor Localization Service for Smartphones" , ACM Symposium on Applied Computing (ACM SAC'19), Limassol, Cyprus, April 8-12, 2019.
- k) Achilleas Achilleos, Christos Markides, Andreas Konstantinidis, Ioannis Giorkas, Georgia M. Kapitsaki, Christos Mettouris, George A. Papadopoulos, "Adopting an Open Smart City Platform: A Survey", IEEE International Smart Cities Conference (ISC2 2019), Track: ICT Technologies and Platforms for Smart Cities IEEE, 2019.
- l) Michalis Massalas, Andreas Konstantinidis, Achilleas Achilleos, Christos Markides and George Papadopoulos, "CrODA-gator: An Open Access CrowdSensing Platform as a Service", 5th CASPer Workshop 2018, 16th IEEE International Conference on Pervasive Computing and Communications, IEEE PerCom 2018.
- m) H. Papadopoulos, N. Georgiou, C. Eliades and A. Konstantinidis. "Android Malware Detection with Unbiased Confidence Guarantees". Neurocomputing, Vol. 280. Elsevier, 2018.
- n) Al-Zoubi, K. Tatas and C. Kyriacou, "Towards Dynamic Multi-task Scheduling of OpenCL Programs on Emerging CPU-GPU-FPGA Heterogeneous Platforms: a Fuzzy Logic Approach", Proc of the 10th IEEE International Conference on Cloud Computing Technology and Science (CloudCom 2018), 10-13 December 2018, Nicosia, Cyprus
- o) N. Georgiou, A. Konstantinidis and H. Papadopoulos. Malware Detection with Confidence Guarantees on Android Devices. In Proceedings of the 12th IFIP International Conference on Artificial Intelligence Applications and Innovations (AIAI 2016). IFIP AICT 475, pp. 407-418. Springer, 2016.

2.b. Need to provide further opportunities for skills development in professional practice contexts. Placement and internship is an area where professional skills can be developed, adapted to the learning profile of each student. This is a key contribution of the programme.

The programme of study “Web and Smart Systems” often invites industry professionals as guest speakers to provide lectures and enrich the programme with their specialized knowledge and expertise. Find below a list of invited speakers delivered a talk at the Frederick University as well as some planned talks that will be offered in the near future:

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The courses of the programme, often contain case studies, or require student to collaborate with external industry stakeholder in order to fulfil an assignment or present a project proposal. For example,

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- MSc student Michalis Hadjidemetriou collaborated with VIPS taxi for the development of an Android application during the WSS503 course.

Additionally, the Frederick University participates in the 2BeConnected program that links students with the Cypriot industry and operates within the framework of the European project “Liaison Offices with the Labour Market”. Frederick University students can register to the 2BeConnected web platform in order to establish a link with the industry and request a placement to organizations located in the Republic of Cyprus.

3. Teaching staff

(ESG 1.5)

| Sub-area | | <i>Non-compliant/ Partially Compliant/Compliant</i> |
|----------|--|---|
| 3.1 | Teaching staff recruitment and development | Compliant |
| 3.2 | Teaching staff number and status | Compliant |
| 3.3 | Synergies of teaching and research | Compliant |

Areas of improvement and recommendations

3.a. There is a need to close the student feedback loop and demonstrate to the students how quality evaluation results have been taken into consideration. An approach would be a student facing 'You said, we did' exercise.

This issue has already been addressed by the Internal Quality Assurance Committee. From the current academic year (2021 – 2022) the students' questionnaires will be analysed collectively by the Quality Committee of each Department. The findings of the Quality Committee will be presented to the Council of the Department where correction measures will be decided. The findings and the correction measures will be part of a report on this issue. This report will be made available to the students and also be discussed with the students during their meeting with the Department. This process will show to the students that their opinion is taken into consideration and also enhance the student involvement in the internal quality process.



4. Student admission, progression, recognition and certification (ESG 1.4)

| Sub-area | | <i>Non-compliant/ Partially Compliant/Compliant</i> |
|----------|---|---|
| 4.1 | Student admission, processes and criteria | Compliant |
| 4.2 | Student progression | Compliant |
| 4.3 | Student recognition | Compliant |
| 4.4 | Student certification | Compliant |

4.a. No recommendations in this section.

We would like to thank the EEC for their positive remarks.

5. Learning resources and student support (ESG 1.6)

| Sub-area | | <i>Non-compliant/ Partially Compliant/Compliant</i> |
|----------|---------------------------------|---|
| 5.1 | Teaching and Learning resources | Partially compliant |
| 5.2 | Physical resources | Compliant |
| 5.3 | Human support resources | Compliant |
| 5.4 | Student support | Compliant |

Areas of improvement and recommendations

5.a. A significant percentage of grades in assessment (50%) is linked to the final exams in the programme, taking place in examination centres. An option would be to think about diversifying further the assessment and include alternative forms of assessment, such as project-based work.

The assessment methods and weights for each course are provided in the Course Description available in the website of each program. This information, with a more detailed description is also provided in the Course Outline provided to the students during the first week of classes in the semester. Course assessment consists of two components: continuous assessment and final exam. The weight of the final exam is typically 40% to 50%. Continuous assessment is typically based on problem solving assignments, literature review assignments, midterm tests, class projects. In most cases class projects include a written report as well as an oral presentation. Some of these assessment methods are group based. The assessment methods and weights for three of the courses of the program are given below. A similar approach is applied to the rest of the courses.

- (a) WSS501 - Computer Networks
- Research Literature Review: 15%
 - Project Work: 35%
 - Midterm Test: 10%
 - Final Exam: 40%
- (b) WSS502 - Web Engineering
- Midterm Test: 20%
 - Course Project: 30%
 - Final Exam: 50%
- (c) WSS531 - Embedded Systems
- Problem Solving Assignments 20%

- Literature Review Assignment 20%
- Tests/quizzes: 20%
- Final exam: 40%

Following the EEC above suggestion the instructors of the program will be encouraged to enrich the assessment methods employed in each course, by including other assessment activities such as debates, paper evaluations, case study scenarios, simulations etc.

5.b. Recognition of prior learning is offered to candidates of both programmes. And there is a process in place at the university of taking prospective students through this. This is important in a programme in this discipline.

We would like to thank the EEC for their positive remarks.

5.c. We recommend that the blended learning induction becomes compulsory for all students as this will help with learning support and the students benefiting further from the affordances of the learning platform. There is a positive long term impact on students if they complete compulsory induction activities in the beginning of their studies as this can reduce needs for support by administrative teams.

We would like to thank the Evaluation Committee for this suggestion.

The University agrees with the Committee's recommendation for the induction course to become compulsory for all students and it is working towards that goal.

5.d. We recommend that staff professional development related to learning and teaching becomes part of a professional accreditation programme (the award of a certificate of attendance might not be a strong motivation for permanent and particularly adjunct staff). The use of microcredentials for reward and recognition is worthy of exploration.

Staff professional development related to teaching and assessment is the responsibility of the Centre for Professional and Personal Development of Frederick University. The Centre develops an annual professional development action plan in regards to the workshops/trainings/courses to be offered during the following academic year. Some of the courses are mandatory for the academic staff, while

other courses can be attended voluntarily. The University agrees with the comment of the EEC that “the award of a certificate of attendance might not be a strong motivation for permanent and particularly adjunct staff” and is working on the establishment of other mechanisms to motivate the academic staff. As far as the use of microcredentials is concerned, for reward and recognition, the University is currently working on developing a system for awarding microcredentials which will include both learning and assessment. The University will explore the use of microcredentials as a form of recognition for the attendance to the courses offered by the Centre for Professional and Personal Development, which will include a form of assessment. The accumulation of such microcredentials can lead to the award of a certificate/diploma.

5.e. Further attention should be given to enhancing the blended learning interactive elements in the programme’s online platform to provide personalised feedback to student input (automated or tutor generated). We did not see any examples of that.

Before the pandemic, the online platform was mostly used by the distance learning programs, even though a number of courses of the conventional programs were using it extensively. With the pandemic for more than two years all courses of the conventional programs were delivered and assessed through the online platform. All academic staff had to attend a number of online seminars to this end. As a result, all courses for both the conventional and the distance learning programs are currently delivered through the online platform. The University gives great emphasis on the online interaction, the use of advanced technologies, the use of data analytics and the integration of innovative and alternative assessment practices mainly for continuous assessment. It also aims to take advantage of the full affordances of the online platform and the related infrastructure developed, such as the hybrid classrooms. It acknowledges the need and has been continuously working towards enhancing and updating its processes and educational material. There is a firm intention from the University to move in this direction. Consequently, to further promote the aforementioned, the Centre for Professional and Personal Development has already developed a professional development action plan in regards to the workshops/trainings/courses to be offered during the following academic year. An indicative list of the planned courses is given below:

- Workshops on the advanced use of LMS (i.e data analytics, use of H5P), other equipment, hybrid classrooms and Virtual Computer Labs

- Training on the use of more advanced tools and pedagogies (i.e. simulations, serious games, augmented and virtual reality, adaptive assessment and e-assessment).
- Trainings on innovative and alternative assessment and feedback methods and tools (within and outside LMS) (adaptive assessment, e-assessment and personalized feedback)
- Training on how to integrate synchronous and asynchronous activities in courses

5.f. We recommend that innovative assessment practice (e.g., use of open book exams) continues after the pandemic. The assessment strategy for this programme could be further enhanced by exam format design that puts further emphasis on critical reasoning and where any multiple choice questions, however small the percentage assigned to them are randomised and are drawn from a database of exam questions.

During the pass semester the final exams and midterm test for all conventional programs were conducted with physical presence in ordinary invigilated classrooms. However some of the exams and/or tests were conducted with physical presence in computer laboratories taking advantage of the functionalities provided by the online platform. The use of open book exams is optional and up to the course instructor to decide. Exam questions are typically problem solving questions and critical reasoning questions, while in some cases some of the questions are multiple choice questions. Following EEC's comment, more emphasis will be given on incorporating critical thinking questions in the exams, while in the case where multiple choice questions will be used, then in this case this part of the exam will be conducted through the online platform, taking advantage of generating randomised questions from a question bank.

5.g. We recommend a convergence of approaches and an alignment between the programmes (conventional and e-learning delivery). This will benefit both cohorts. Approaches that could achieve this would be adopting a flexible approach in allowing the students to move from the conventional to the e-learning programme and vice versa.

We agree with the suggestion of the Evaluation Committee, however at this point the CYQAA prohibits the mixture of conventional and e-learning students in the same class.



6. Conclusions and final remarks

The committee has concluded that the Programme is worthy of support and recommends that it be approved. We offer a number of recommendations that we believe will further strengthen this programme:

Specialisations requirement

An area in the programme design that needs to be addressed is that the conventional programme offers two specialisations. The specialisations are only available to the candidates of the conventional programme and not to those of the e-learning programme, creating a disparity of the two for which there does not seem to be an articulated rationale. We strongly recommend that there is alignment between the programmes in this respect to ensure that all students (in the conventional programme and e-learning programmes) have broadly the same experience and student journey.

In our view, this should lead to either:

1. Not offering the specialisations in the conventional programme;
2. Or adding the specialisations and related structure to the e-learning programme.

The team should also consider extending the choice of elective courses to give more choice to students. If option 2 is chosen this would also allow the students to pick through choice of electives the desired direction of specialisation.

The Department of Electrical Engineering, Computer Engineering and Informatics wishes to express its gratitude to the members of the External Evaluation Committee for their thorough and insightful evaluation of the master programme of study MSc in Web and Smart Systems (Conventional), as well as their fruitful comments and constructive discussion. The Department is fully satisfied with EEC's recommendation to approve the Program.

As far as the Specialization requirement is concerned, the Department believes that it is essential to have the two specializations and therefor proposes the option 2, that is add the two specializations in the Distance Learning program. It is also noted that two extra elective courses have been added in the structure of the program, one for each specialization, in order to enrich more the two specializations.

Recommendations

Programme evaluation

- The university should consider including at least one representative from industry in the Internal Quality Assurance Committee, to ensure that the needs of the industry are taken into account and regularly updated. This could also have positive implications for employability of the programme graduates.
- There is a need to close the student feedback loop with the students about how issues raised from the quality evaluation have been taken into consideration and addressed. An approach would be a regular student facing 'You said, we did' exercise.

Research teaching nexus

Greater clarity on how research is linked to teaching beyond the research informed descriptions of many study guides, particularly with regards to how students benefit directly from staff involvement in research activities.

Placements

Need to provide further opportunities for skills development in professional practice contexts. Placement and internship is an area where professional skills can be developed, adapted to the learning profile of each student. This is a key contribution of the programme.

Assessment design

We recommend diversifying the assessment to include a bigger number of alternative forms of assessment subject to constraints from professional/regulatory bodies, such as coursework or project-based work with an emphasis on authentic assessment design.

We recommend that innovative assessment practice (e.g., use of open book exams) continues. The assessment strategy for this programme could be further enhanced by exam format design that puts further emphasis on critical reasoning and where any multiple choice questions, however small



the percentage assigned to them, are randomised for each student and are drawn from a database of exam questions.

Induction

We recommend that the induction into blended learning becomes compulsory for all students as this will help with learning support and the students benefiting further from blended learning. There is a positive long term impact on student behaviour if they complete compulsory induction activities in the beginning of their studies, as this has good chances of reducing the long term level of support by administrative teams.

Continuous professional development

We recommend that staff professional development around learning and teaching becomes part of a professional accreditation programme. The use of microcredentials for reward and recognition as a motivational strategy is worthy of exploration. This should include both permanent and adjunct staff.

Blended learning

Further attention should be given to enhancing the interactive elements in the programme's online platforms, for instance to provide personalised feedback to student input (automated or tutor generated). We did not see any examples of that.

Conventional and e-learning delivery

We recommend a convergence of approaches and an alignment between the programmes (conventional and e-learning delivery). This will benefit both cohorts. Approaches that could achieve this would be enhancing the flexible learning aspects of both programmes, for instance rationalising student workloads to include both contact and study hours, allowing the students to move from the conventional to the e-learning programme and vice versa, etc.




All of the above recommendations are provided by the EEC in the main body of this report. The Department wishes to thank the EEC for their valuable recommendations. The response of Department is provided in the corresponding sections in the main body of the report.

Finally, The Department also wishes to thank the Cyprus Agency of Quality Assurance and Accreditation in Higher Education, as well as the members of staff of the Agency that facilitated the organisation and implementation of the External Evaluation Committee's visit and the accreditation of the MSc in Web and Smart Systems program of study.



3. Higher Education Institution academic representatives

| <i>Name</i> | <i>Position</i> | <i>Signature</i> |
|---------------------------|-----------------|--|
| Prof. George Demosthenous | Rector |  |

Date: 13/06/2022

