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Date: 28-03-22

External Evaluation Report

(E-learning programme of study)

- Higher Education Institution:
Frederick University
- Town: Nicosia
- School/Faculty (if applicable):): Engineering
- Department/ Sector: Electrical Engineering,
Computer Engineering and Informatics
- Programme of study- Name (Duration, ECTS, Cycle)

In Greek:

Διαδικτυακά και Έξυπνα Συστήματα (3 ακαδημαϊκά
εξάμηνα,

90 ECTS, Master (MSc), Εξ αποστάσεως)

In English:

Web and Smart Systems (3 academic semesters, 90
ECTS)

- Language(s) of instruction: English
- Programme's status: New
- Concentrations (if any):



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 2021 [L.136(I)/2015 – L.132(I)/2021].

In Greek: Concentrations

In English: Concentrations

A. Introduction

This part includes basic information regarding the onsite visit.

Following a briefing of the External Evaluation Committee (EEC) by Mrs Natasa Kazakaiou from CYQAA, the visit to Frederick University took place on March 28th 2022. Because of COVID-19 restrictions this evaluation was conducted remotely.

The EEC was welcomed by the rector of Frederick University, Professor George Demosthenous, along with senior members of the University management. Over the course of the day, meetings were held with academic and professional staff at the University. These included:

- academic staff who coordinate the programme
- academic staff who will teach on the programme
- staff involved in the quality assurance processes at the university
- representatives of administrative staff
- library and IT staff
- members of the student body who offered feedback on their experience of studying at Frederick University

The members of the EEC were given the opportunity to engage in discussions with the university colleagues throughout our visit and would like to thank all parties involved for their willingness to interact with the members of the committee during the remote evaluation. The committee would also like to express its gratitude to Mrs Natasa Kazakaiou, the CYQAA coordinator, for organising the event and for her support to the team.

B. External Evaluation Committee (EEC)

<i>Name</i>	<i>Position</i>	<i>University</i>
Stylianos Hatzipanagos (chair)	Fellow and Executive Lead for Research and Scholarship	University of London Centre for Distance Education, UK
Fabio Crestani	Professor and Head of the Information retrieval Group, Faculty of Informatics	Università dell Svizzera Italiana (USI), Lugano, Switzerland
Nicola Ferro	Head of the Intelligent Interactive Information Access (IIIA) hub and of the Information Management Systems (IMS) research group, Department of Information Engineering	University of Padua, Italy
Krinos Vasileiou	Undergraduate, Computer Engineering and Informatics (BSc)	Cyprus University of Technology

C. Guidelines on content and structure of the report

- *The external evaluation report follows the structure of assessment areas.*
- *At the beginning of each assessment area there is a box presenting:*
 - (a) sub-areas*
 - (b) standards which are relevant to the European Standards and Guidelines (ESG)*
 - (c) some questions that EEC may find useful.*
- *The questions aim at facilitating the understanding of each assessment area and at illustrating the range of topics covered by the standards.*
- *Under each assessment area, it is important to provide information regarding the compliance with the requirements of each sub-area. In particular, the following must be included:*

Findings

A short description of the situation in the Higher Education Institution (HEI), based on elements from the application for external evaluation and on findings from the onsite visit.

Strengths

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

Areas of improvement and recommendations

A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

- *The EEC should state the compliance for each sub-area (Non-compliant, Partially compliant, Compliant), which must be in agreement with everything stated in the report. It is pointed out that, in the case of standards that cannot be applied due to the status of the HEI and/or of the programme of study, N/A (= Not Applicable) should be noted.*
- *The EEC should state the conclusions and final remarks regarding the programme of study as a whole.*
- *The report may also address other issues which the EEC finds relevant.*

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

Sub-areas

- 1.1 Policy for quality assurance
- 1.2 Design, approval, on-going monitoring and review
- 1.3 Public information
- 1.4 Information management

1.1 Policy for quality assurance

Standards

- *Policy for quality assurance of the programme of study:*
 - *has a formal status and is publicly available*
 - *supports the organisation of the quality assurance system through appropriate structures, regulations and processes*
 - *supports teaching, administrative staff and students to take on their responsibilities in quality assurance*
 - *ensures academic integrity and freedom and is vigilant against academic fraud*
 - *guards against intolerance of any kind or discrimination against the students or staff*
 - *supports the involvement of external stakeholders*

1.2 Design, approval, on-going monitoring and review

Standards

- *The programme of study:*
 - *is designed with overall programme objectives that are in line with the institutional strategy and have explicit intended learning outcomes*
 - *is designed by involving students and other stakeholders*
 - *benefits from external expertise*
 - *reflects the four purposes of higher education of the Council of Europe (preparation for sustainable employment, personal development, preparation for life as active citizens in democratic societies, the development and maintenance, through teaching, learning and research, of a broad, advanced knowledge base)*
 - *is designed so that it enables smooth student progression*
 - *is designed so that the exams' and assignments' content corresponds to the level of the programme and the number of ECTS*
 - *defines the expected student workload in ECTS*
 - *includes well-structured placement opportunities where appropriate*
 - *is subject to a formal institutional approval process*

- *results in a qualification that is clearly specified and communicated, and refers to the correct level of the National Qualifications Framework for Higher Education and, consequently, to the Framework for Qualifications of the European Higher Education Area*
- *is regularly monitored in the light of the latest research in the given discipline, thus ensuring that the programme is up-to-date*
- *is periodically reviewed so that it takes into account the changing needs of society, the students' workload, progression and completion, the effectiveness of procedures for assessment of students, student expectations, needs and satisfaction in relation to the programme*
- *is reviewed and revised regularly involving students and other stakeholders*

1.3 Public information

Standards

- *Regarding the programme of study, clear, accurate, up-to date and readily accessible information is published about:*
 - *selection criteria*
 - *intended learning outcomes*
 - *qualification awarded*
 - *teaching, learning and assessment procedures*
 - *pass rates*
 - *learning opportunities available to the students*
 - *graduate employment information*

1.4 Information management

Standards

- *Information for the effective management of the programme of study is collected, monitored and analysed:*
 - *key performance indicators*
 - *profile of the student population*
 - *student progression, success and drop-out rates*
 - *students' satisfaction with their programmes*
 - *learning resources and student support available*
 - *career paths of graduates*
- *Students and staff are involved in providing and analysing information and planning follow-up activities.*

You may also consider the following questions:

- *What is the procedure for quality assurance of the programme and who is involved?*
- *Who is involved in the study programme's design and development (launching, changing, internal evaluation) and what is taken into account (strategies, the needs of society, etc.)?*
- *How/to what extent are students themselves involved in the development of the content of their studies?*
- *Please evaluate a) whether the study programme remains current and consistent with developments in society (labour market, digital technologies, etc.), and b) whether the content and objectives of the study programme are in accordance with each other?*
- *Do the content and the delivery of the programme correspond to the European Qualifications Framework (EQF)?*
- *How is coherence of the study programme ensured, i.e., logical sequence and coherence of courses? How are substantial overlaps between courses avoided? How is it ensured that the teaching staff is aware of the content and outputs of their colleagues' work within the same study programme?*
- *How does the study programme support development of the learners' general competencies (including digital literacy, foreign language skills, entrepreneurship, communication and teamwork skills)?*
- *What are the scope and objectives of the foundation courses in the study programme (where appropriate)? What are the pass rates?*
- *How long does it take a student on average to graduate? Is the graduation rate for the study programme analogous to other European programmes with similar content? What is the pass rate per course/semester?*
- ***How is it ensured that the actual student workload is in accordance with the workload expressed by ECTS?***
- *What are the opportunities for international students to participate in the study programme (courses/modules taught in a foreign language)?*
- *Is information related to the programme of study publicly available?*
- *How is the HEI evaluating the success of its graduates in the labor market? What is the feedback from graduates of the study programme on their employment and/or continuation of studies?*
- *Have the results of student feedback been analysed and taken into account, and how (e.g., when planning in-service training for the teaching staff)?*
- *What are the reasons for dropping out (voluntary withdrawal)? What has been done to reduce the number of such students?*

Findings

A short description of the situation in the Higher Education Institution (HEI), based on elements from the application for external evaluation and on findings from the onsite visit.

The Master in Web and Smart Systems will be delivered both in online and in-presence mode. In this report we evaluate the e-learning format, although the internal quality assurance policies seem to be the same for both modes of delivery of the Master.

The programme of the Master in Web and Smart Systems study is well designed. It is a classical 1.5 years (3 semesters) programme with 90 ECTS of student workload. This comprises 40 ECTS of compulsory courses, 20 of electives, and a thesis of 30 ECTS. The Master aims at providing the students with an in-depth knowledge and advanced skills of the technologies relevant to the design, implementation, and evaluation of web applications and smart systems. The courses, each of 10 ECTS in workload, seem to cover the major areas related to the Web and Smart Systems. An area in the programme design that needs to be addressed is that the conventional programme offers two specialisations in Web Systems or Smart Systems. However, in the e-learning version of the programme the choices given to students to pick either Web Systems or Smart Systems as specialisations seem to have been removed. This creates a disparity between the two for which there does not seem to be a clearly articulated rationale.

The internal policy and quality assurance procedures are governed by a committee composed of 7 members. The committee includes two students' representatives (one undergraduate and one graduate, both elected by the students), thus ensuring that the students' view is well represented. It is charged with identifying weaknesses in the programme, and to support teaching, administrative staff and students in all matters related to academic integrity and freedom. It ensures accountability of staff and students in relation to instances of fraud, intolerance, or discrimination. The committee also aims at supplying the students with a lifelong learning approach, which is commendable. The EEC thinks this quality assurance body is well designed and appreciates the presence of two QA experts in its ranks, ensuring that a quality of culture is pursued and maintained.

The internal evaluation procedure is also well designed. It leads to an annual reporting by all academic and administrative bodies to the Internal Quality Committee. The committee discusses its findings with relevant bodies and reports back with comments and suggestions for improvement. The Internal Quality Committee submits its bi-yearly report to the Senate.

The Master programme claims to be directed to provide "industry-ready" graduates for the needs of the market. This EEC finds the goal commendable, that recognises that it would certainly be facilitated if *there was at least one industry representative in the Internal Quality Committee*.

The curriculum reflects well the four purposes of higher education of the Council of Europe. The student workload appeared to be in accordance with the European Qualification Framework. The workload given in ECTS to courses also appears to be reasonable. The number of electives that differentiate one master's specialisation from the other (2 electives from a total 6 courses) is sufficient to provide a specialisation between either Web Systems or Smart Systems. However, the choice available to the students to pick electives related to the specialisation is barely sufficient (there are only 4 courses proposed from which the students need to pick 2). A larger choice would make the programme more attractive.

Finally, information about student selection criteria, qualifications awarded, pass rates, learning opportunities, etc, is readily accessible to students. Such information also serves to attract students to the programme, something which the university obviously reserves a lot of attention. On the other hand, student progression, satisfaction, and dropout rates are kept more confidential. This is not unusual and understandable, as they are more valuable for the effective management of the programme, than to the students.

Strengths

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

- The EEC found that the policy for quality assurance has a proper formal status and is publicly available.
- Information related to student admission criteria, courses learning outcomes, teaching, and learning processes, and marking procedures, are publicly and readily accessible.
- Information regarding student acceptance into the programme, student progression, and student satisfaction is regularly collected and is effectively managed.

Areas of improvement and recommendations

A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

- Consider giving the students taking the Master (e-learning mode) the possibility to select either the specialisation in Web Design or in Smart System, same as for the students of the in-presence Master.
- Consider including at least one representative from industry in the Internal Quality Committee, to ensure that the needs of the industry are kept into consideration and regularly updated.
- Consider extending the choice of electives courses to give more freedom to students to pick the desired direction of specialisation.

Please select what is appropriate for each of the following sub-areas:

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	Partially compliant
1.3	Public information	Compliant
1.4	Information management	Compliant

2. Student – centred learning, teaching and assessment (ESG 1.3)

Sub-areas

- 2.1 Process of teaching and learning and student-centred teaching methodology**
- 2.2 Practical training**
- 2.3 Student assessment**
- 2.4 Study guides structure, content and interactive activities**

2.1 Process of teaching and learning and student-centred teaching methodology

Standards

- *The e-learning methodology is appropriate for the particular programme of study.*
- *Expected teleconferences for presentations, discussion and question-answer sessions, and guidance are set.*
- *A specific plan is developed to safeguard and assess the interaction:*
 - *among students*
 - *between students and teaching staff*
 - *between students and study guides/material of study*
- *Training, guidance and support are provided to the students focusing on interaction and the specificities of e-learning.*
- *The process of teaching and learning supports students' individual and social development.*
- *The process of teaching and learning is flexible, considers different modes of e-learning delivery, where appropriate, uses a variety of pedagogical methods and facilitates the achievement of planned learning outcomes.*
- *Students are encouraged to take an active role in creating the e-learning process.*
- *The implementation of student-centered learning and teaching encourages a sense of autonomy in the learner, while ensuring adequate guidance and support from the teacher.*
- *Teaching methods, tools and material used in teaching are modern, effective, support the use of modern educational technologies and are regularly updated.*
- *Mutual respect within the learner-teacher relationship is promoted.*
- *The implementation of student-centred learning and teaching respects and attends to the diversity of students and their needs, enabling flexible learning paths.*
- *Appropriate procedures for dealing with students' complaints regarding the process of teaching and learning are set.*

2.2 Practical training

Standards

- *Practical and theoretical studies are interconnected.*
- *The organisation and the content of practical training, if applicable, support achievement of planned learning outcomes and meet the needs of the stakeholders.*

2.3 Student assessment

Standards

- *A complete assessment framework is designed, focusing on e-learning methodology, including clearly defined evaluation criteria for student assignments and the final examination.*
- *Assessment is consistent, fairly applied to all students and carried out in accordance with the stated procedures.*
- *Assessment is appropriate, transparent, objective and supports the development of the learner.*
- *The criteria for the method of assessment, as well as criteria for marking, are published in advance.*
- *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 e-learning process.*
- *Assessment, where possible, is carried out by more than one examiner.*
- *A formal procedure for student appeals is in place.*
- *Assessors are familiar with existing testing and examination methods and receive support in developing their own skills in this field.*
- *The regulations for assessment take into account mitigating circumstances.*

2.4 Study guides structure, content and interactive activities

Standards

- *A study guide for each course, fully aligned with e-learning philosophy and methodology and the need for student interaction with the material is developed. The study guide should include, for each course week / module, the following:*
 - *Clearly defined objectives and expected learning outcomes of the programme, of the modules and activities in an organised and coherent manner*
 - *Presentation of course material, and students' activities on a weekly basis, in a variety of ways and means (e.g. printed material, electronic material, teleconferencing, multimedia)*
 - ***Weekly schedule of interactive activities and exercises (i.e. simulations, problem solving, scenarios, argumentation)***
 - *Clear instructions for creating posts, discussion, and feedback*
 - *Self-assessment exercises and self-correction guide*
 - *Bibliographic references and suggestions for further study*
 - *Number of assignments/papers and their topics, along with instructions and additional study material*
 - *Synopsis*
- *Study guides, material and activities are appropriate for the level of the programme according to the EQF.*

You may also consider the following questions:

- *Is the nature of the programme compatible with e-learning delivery?*
- *How do the programme, the material, the facilities, and the guidelines safeguard the interaction between students, students and teaching staff, students and the material?*
- *How many students upload their work and discuss it in the platform during the semester?*
- *How is it monitored that the teaching staff base their teaching and assessment methods on objectives and intended learning outcomes? Provide samples of examination papers (if available).*
- *How are students' different abilities, learning needs and learning opportunities taken into consideration when conducting educational activities?*
- *How is the development of students' general competencies (including digital skills) supported in educational activities?*
- *How is it ensured that innovative teaching methods, learning environments and learning aids that support learning are diverse and used in educational activities?*
- *Is the teaching staff using new technology in order to make the teaching process more effective?*
- *How is it ensured that theory and practice are interconnected in teaching and learning?*
- *How is practical training organised (finding practical training positions, guidelines for practical training, supervision, reporting, feedback, etc.)? What role does practical training have in achieving the objectives of the study programme? What is student feedback on the content and arrangement of practical training?*
- **Are students actively involved in research? How is student involvement in research set up?**
- *How is supervision of student research papers (seminar papers, projects, theses, etc.) organised?*
- **Do students' assessments correspond to the European Qualifications Framework (EQF)?**
- *How are the assessment methods chosen and to what extent do students get supportive feedback on their academic progress during their studies?*
- *How is the objectivity and relevance of student assessment ensured (assessment of the degree of achievement of the intended learning outcomes)?*

Findings

A short description of the situation in the Higher Education Institution (HEI), based on elements from the application for external evaluation and on findings from the onsite visit.

- Our discussion with students indicated satisfaction with their experience while studying the programme. The satisfactory levels of learning support they received during the pandemic is a good indicator of how students will be supported in the distance learning programme.
- The general programme documentation and the student guides demonstrate constructive alignment between the learning outcomes which the students need to achieve and the methods of assessment that are employed in the programme. Whereas the end of course assessment (exams) does not provide any opportunities for the students to receive feedback on the performance, the description of activities in the study guides for each course indicate an awareness of the need to explicitly link the teaching and assessment methods with the overall programme objectives and learning outcomes. The sample exam papers provided

examples of these links, though the inclusion of multiple choice questions in the examples we have reviewed does not lend itself to achieving higher level outcomes in end of term/year exams.

- Practical training seems to be directly related to the theoretical material.
- Discussions with the programme team suggest that they see strong synergies between teaching and research in this programme.. At thesis level, there appears to be a traditional 1-2-1 supervisory structure in place with members of staff given responsibility for supervising students during the development of their dissertation.

Strengths

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

- A constructive alignment approach that links programme and course learning outcomes with assessments.
- Quality of course descriptors – the inclusion of detailed explanations in the study guides clearly benefits staff and the students in the distance learning context.
- Support infrastructure for students in need and those with special needs. This seems to be also applied to the distance learning context with clear to the student ‘first ports of call’ when they need support.

Areas of improvement and recommendations

A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

- Greater clarity in how research is linked to teaching beyond the research informed descriptions of many study guides, particularly with regards to how students benefit from staff research involvement beyond being taught by active researchers.
- Need to provide further opportunities for skills development in professional practice contexts. The programme team should consider a more explicit and clearly signposted inclusion of a placement/internship approach adapted to the needs of each student. This is a key contribution in the current setup of the programme, however this aspect can be problematic for the e-learning students as opportunities for placements and internships may be fewer where they are located.

Please select what is appropriate for each of the following sub-areas:

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



2.4	Study guides structure, content and interactive activities	Choose answer
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3. Teaching staff (ESG 1.5)

Sub-areas

3.1 Teaching staff recruitment and development

3.2 Teaching staff number and status

3.3 Synergies of teaching and research

3.1 Teaching staff recruitment and development

Standards

- *Institutions ensure the competence of their teaching staff.*
- *Fair, transparent and clear processes for the recruitment and development of the teaching staff are set up.*
- *Teaching staff qualifications are adequate to achieve the objectives and planned learning outcomes of the study programme, and to ensure quality and sustainability of the teaching and learning.*
- *The teaching staff is regularly engaged in professional and teaching-skills training and development.*
- *Training, guidance and support are provided to the teaching staff focusing on interaction and the specificities of e-learning.*
- *Promotion of the teaching staff takes into account the quality of their teaching, their research activity, the development of their teaching skills and their mobility.*
- *Innovation in teaching methods and the use of new technologies is encouraged.*
- *Conditions of employment that recognise the importance of teaching are followed.*
- *Recognised visiting teaching staff participates in teaching the study programme.*

3.2 Teaching staff number and status

Standards

- *The number of the teaching staff is adequate to support the programme of study.*
- *The teaching staff status (rank, full/part time) is appropriate to offer a quality programme of study.*
- *Visiting staff number does not exceed the number of the permanent staff.*

3.3 Synergies of teaching and research

Standards

- *The teaching staff collaborate in the fields of teaching and research within the HEI and with partners outside (practitioners in their fields, employers, and staff members at other HEIs in Cyprus or abroad).*
- *Scholarly activity to strengthen the link between education and research is encouraged.*
- *The teaching staff publications are within the discipline.*

- *Teaching staff studies and publications are closely related to the programme's courses.*
- *The allocation of teaching hours compared to the time for research activity is appropriate.*

You may also consider the following questions:

- *Is the teaching staff qualified to teach in the e-learning programme of study?*
- *How are the members of the teaching staff supported with regard to the development of their teaching skills? How is feedback given to members of the teaching staff regarding their teaching results and teaching skills?*
- *How is the teaching performance assessed? How does their teaching performance affect their remuneration, evaluation and/or selection?*
- *Is teaching connected with research?*
- *Does the HEI involve visiting teaching staff from other HEIs in Cyprus and abroad?*
- *What is the number, workload, qualifications and status of the teaching staff (rank, full/part timers)?*
- *Is student evaluation conducted on the teaching staff? If yes, have the results of student feedback been analysed and taken into account, and how (e.g., when planning in-service training for the teaching staff)?*

Findings

A short description of the situation in the Higher Education Institution (HEI), based on elements from the application for external evaluation and on findings from the onsite visit.

Same as with the conventional programme, the remote programme also relies on an appropriate number of permanent staff members, consisting of 79 faculty members (1 full professor, 1 associate professor, 4 assistant professors, 1 lecturer) plus 1 visiting professor. The number of permanent staff is bigger than the number of visiting professors in compliance with CEQA regulations. Moreover, to maintain the quality of the teaching experience in a remote context, when the number of students attending a course is higher than 30, they are split into groups of (roughly) 30 students and adjunct staff are hired to carry on the day-to-day interaction and management of students, under the supervision and guidance of the faculty member who is responsible for the whole programme.

The faculty staff members involved in the programme are well qualified, in terms of teaching status and rank, and their CVs are of a high standard, ensuring a high expertise, which is appropriate to deliver a high quality teaching experience to students. Faculty members conduct research and publish in areas relevant to the programme.

The research background of the faculties informed both the design of the programme and the content of the lectures. During the master thesis students can be involved in research projects (besides industrial ones) and this can also lead to joint publications among students and teachers.

The allocation of teaching hours is appropriate, around 9 hours per week on average, and a reduction of the teaching load is possible for those staff members who are responsible for relevant research grants.

The University provides regular training opportunities for teaching staff both about emerging teaching methods and new technologies and tools for teaching. In addition, the University has a

specific organisation for Distance Learning Unit (DLU, LSU, ODLC) which oversees, coordinates, and provides support for all distance learning activities, which concern several programmes in various areas. In particular, the University adopts and develops its own Distance Learning Pedagogical Framework (DLPG), which informs the different programmes, and trains faculty members to properly adopt this framework in their own teaching activities.

Specific support is provided to teaching staff for the creation of teaching material suitable for distance learning and compliant with the above mentioned DLPG, both in terms of templates to be followed and also concerning the actual creation of material using various tools.

Student evaluation is regularly conducted on teaching staff and on the courses, both during courses themselves and at their end. Results of the evaluation are appropriately analysed and taken into account by the Internal Quality Committee. However, the loop with students is not closed, since feedback about the decisions and modifications taken to address evaluation issues is not explicitly provided to them. Moreover, in case a class is split into subgroups, it is not fully clear how possible variations in quality evaluation concerning different adjunct staff are traced and addressed.

For the recruitment of new staff, regular reviews are conducted by an appointed committee, also based on self-evaluation, focus groups, and strategic directions, in order to identify potential new teaching needs and available expertise. If some key expertise is missing, then either an adjunct or visiting professor or new staff members are recruited. This has happened in past iterations of the conventional programme.

Strengths

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

- Permanent staff is well qualified for both research and teaching in the disciplinary area
- Good blend of research into students' experience and teaching activities

Areas of improvement and recommendations

A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

- 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 is particularly important in the e-learning programme to ensure that the student voice is 'heard' and feedback is responded to.
- Define a process to evaluate quality and consistency of pedagogical approach when bigger classes are split into groups and managed by different members of the adjunct staff.

Please select what is appropriate for each of the following sub-areas:

Sub-area	<p style="text-align: center;">Non-compliant/ Partially Compliant/Compliant</p>
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3.1	Teaching staff recruitment and development	Compliant
3.2	Teaching staff number and status	Compliant
3.3	Synergies of teaching and research	Compliant

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

Sub-areas

- 4.1 Student admission, processes and criteria
- 4.2 Student progression
- 4.3 Student recognition
- 4.4 Student certification

4.1 Student admission, processes and criteria

Standards

- *Pre-defined and published regulations regarding student admission are in place.*
- *Access policies, admission processes and criteria are implemented consistently and in a transparent manner.*

4.2 Student progression

Standards

- *Pre-defined and published regulations regarding student progression are in place.*
- *Processes and tools to collect, monitor and act on information on student progression, are in place.*

4.3 Student recognition

Standards

- *Pre-defined and published regulations regarding student recognition are in place.*
- *Fair recognition of higher education qualifications, periods of study and prior learning, including the recognition of non-formal and informal learning, are essential components for ensuring the students' progress in their studies, while promoting mobility.*
- *Appropriate recognition procedures are in place that rely on:*
 - *institutional practice for recognition being in line with the principles of the Lisbon Recognition Convention*
 - *cooperation with other institutions, quality assurance agencies and the national ENIC/NARIC centre with a view to ensuring coherent recognition across the country*

4.4 Student certification

Standards

- *Pre-defined and published regulations regarding student certification are in place.*

- *Students receive certification explaining the qualification gained, including achieved learning outcomes and the context, level, content and status of the studies that were pursued and successfully completed.*

You may also consider the following questions:

- *Are the admission requirements for the study programme appropriate? How is the students' prior preparation/education assessed (including the level of international students, for example)?*
- *How is the procedure of recognition for prior learning and work experience ensured, including recognition of study results acquired at foreign higher education institutions?*
- *Is the certification of the HEI accompanied by a diploma supplement, which is in line with European and international standards?*

Findings

A short description of the situation in the Higher Education Institution (HEI), based on elements from the application for external evaluation and on findings from the onsite visit.

- As in the conventional programme, there is a set of pre-defined requirements for admission. This is a standardised process where prospective students send their application to the admissions office and go through an evaluation process based on the applicants' qualifications and experience on the subject.
- Laboratories, exercises and formative and summative assessments are employed in each disciplinary topic to support progression
- Each course employs the European Credit Transfer and Accumulation System and the whole programme conforms to the European Qualifications Framework.

Strengths

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

Current and graduate students confirmed the supportive nature of the institution.

Areas of improvement and recommendations

A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

No recommendations in this section.

Please select what is appropriate for each of the following sub-areas:

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

5. Learning resources and student support (ESG 1.6)

Sub-areas

- 5.1 Teaching and Learning resources
- 5.2 Physical resources
- 5.3 Human support resources
- 5.4 Student support

5.1 Teaching and Learning resources

Standards

- *Weekly interactive activities per each course are set.*
- *The e-learning material and activities take advantage of the capabilities offered by the virtual and audio-visual environment and the following are applied:*
 - *Simulations in virtual environments*
 - *Problem solving scenarios*
 - *Interactive learning and formative assessment games*
 - *Interactive weekly activities with image, sound and unlimited possibilities for reality reconstruction and further processing based on hypotheses*
 - *They have the ability to transfer students to real-life situations, make decisions, and study the consequences of their decisions*
 - *They help in building skills both in experiences and attitudes like in real life and also in experiencing - not just memorizing knowledge*
- *A pedagogical planning unit for e-learning, which is responsible for the support of the e-learning unit and addresses the requirements for study materials, interactive activities and formative assessment in accordance to international standards, is established.*
- *Adequacy of resources is ensured for changing circumstances (change in student numbers, etc.).*
- *All resources are fit for purpose.*
- *Student-centred learning and flexible modes of e-learning and teaching, are taken into account when allocating, planning and providing the learning resources.*

5.2 Physical resources

Standards

- *Physical resources, i.e. premises, libraries, study facilities, IT infrastructure, are adequate to support the study programme.*
- *Adequacy of resources is ensured for changing circumstances (change in student numbers, etc.).*
- *All resources are fit for purpose and students are informed about the services available to them.*

5.3 Human support resources

Standards

- *Human support resources, i.e. tutors/mentors, counsellors, other advisers, qualified administrative staff, are adequate to support the study programme.*
- *Adequacy of resources is ensured for changing circumstances (change in student numbers, etc.).*
- *All resources are fit for purpose and students are informed about the services available to them.*

5.4 Student support

Standards

- *Student support is provided covering the needs of a diverse student population, such as mature, part-time, employed and international students and students with special needs.*
- *Students are informed about the services available to them.*
- *Student-centred learning and flexible modes of learning and teaching, are taken into account when allocating, planning and providing student support.*
- *Students' mobility within and across higher education systems is encouraged and supported.*

You may also consider the following questions:

- *Evaluate the supply of teaching materials and equipment (including teaching labs, expendable materials, etc.), the condition of classrooms, adequacy of financial resources to conduct the study programme and achieve its objectives. What needs to be supplemented/ improved?*
- *What is the feedback from the teaching staff on the availability of teaching materials, classrooms, etc.?*

- *Are the resources in accordance with actual (changing) needs and contemporary requirements? How is the effectiveness of using resources ensured?*
- *What are the resource-related trends and future risks (risks arising from changing numbers of students, obsolescence of teaching equipment, etc.)? How are these trends taken into account and how are the risks mitigated?*
- *Evaluate student feedback on support services. Based on student feedback, which support services (including information flow, counselling) need further development?*
- *How is student learning within the standard period of study supported (student counselling, flexibility of the study programme, etc.)?*
- *How students' special needs are considered (different capabilities, different levels of academic preparation, special needs due to physical disabilities, etc.)?*
- *How is student mobility being supported?*

Findings

A short description of the situation in the Higher Education Institution (HEI), based on elements from the application for external evaluation and on findings from the onsite visit.

Overall, this is a programme with sufficient attention to detail in terms of learning and teaching resources and provision for student support in key areas such as student engagement, assessment, research methods and dissertation support. Our evaluation was based on pedagogical approaches and examples taken from the conventional programme that are transferable to the e-learning context.

Strengths

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

Organisation

There is a Distance Learning infrastructure that supports the development and delivery of Distance Learning Programmes and has the overviews of quality assurance issues regarding e-learning at the institution, including a Distance Learning Unit which deals with operational and administrative matters associated with the distance learning provision. Pedagogical considerations seem to be taken into account in the design and delivery of the programme. The nature of the programme is compatible with e-learning delivery.

Programme design and delivery

There are some established mechanisms and technologies that support interaction between students and staff. The main online platform is the virtual learning environment (VLE, Moodle) and its embedded computer mediated communication.

The virtual learning environment offers opportunities for interaction, predominantly through the use of discussion fora.

Staff and student support

Staff and students are well supported:

- Staff training and professional development on the specificities of distance learning is offered.

- There is an induction to distance and online learning offered to students in the beginning of their studies. This is optional.
- Support is provided to the students, from technical and administrative staff.
- Recognition of prior learning is offered to candidates of both the conventional and e-learning programmes. And there is a process in place at the university of taking prospective students through this. This is important in a programme like this and it can help with recruitment.

Resources

Adequate sources of information for students are available and the university library which offers hard and electronic copies. We were not able to visit the University because of the pandemic consequently we did not manage to have hands-on experience of assessing the full extent of resources and teaching materials available to support the programme. From discussions we had with the programme team and documentation that we were shown it appears that these seem to be adequate. We were given a virtual tour of the facilities at the university, such as laboratory spaces, however these will be of limited relevance to the distance learning students. We were informed that a Data Centre has been developed to also support the DL delivery.

Human resources

Academic staff are either permanent or associate part time lecturers. Administrative staff numbers appear to be adequate for the support of the programme.

Assessment

Assessment approaches in the distance learning mode include the use of an end of term exam (50%), and continuous assessment consisting of coursework, participation in activities, quizzes and video presentations. In addition there were formative tasks and formative self-evaluation activities.

During the pandemic exam operations were moved online. This had an impact on the examination process and on the format/content of the exam. This transition of exams to an open book format seems to be suitable for online delivery, provided potential issues of academic integrity lapses and associated academic offences are addressed.

Areas of improvement and recommendations

A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

- A significant percentage of grades in assessment (50%) is linked to the final exams in the programme. These exams operate mainly in a face-to-face format. An option would be to think about diversifying the assessment to include alternative forms of assessment, e.g., coursework or project-based work.
- The virtual learning environment offers opportunities for interaction; however, these seem to be limited to online lectures with some student participation. The committee has not seen examples of innovative use of technology. A network simulator was mentioned in the discussions we had with members of staff.
- The discipline in which the DL/e-learning programme is in requires the use of laboratory based work that could create a disparity between the conventional and the e-learning programme if a justified objective is for both cohorts to have a broadly equivalent experience. There were steps in this direction and the use of a virtual computing lab was mentioned.

Recommendations

- We recommend that the 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 has good chances of reducing the level of support by administrative teams. This is particularly relevant for DL/e-learning students.
- We recommend that staff professional development around distance and online learning becomes part of a professional accreditation programme. The use of microcredentials for reward and recognition is worthy of exploration
- We recommend that online interaction is further developed by the use of technologies such as virtual or augmented reality and computer simulations and serious games.
- We recommended that further attention is given to enhancing the interactive elements in the programme's online platform to provide personalised feedback to student input (automated or tutor generated).
- We recommend that innovative assessment practice (e.g., use of open book or open world exams) continues after the pandemic as it is more suitable for this mode of delivery. 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.
- We recommend a convergence of approaches and an alignment between the programmes in relation to the conventional and the e-learning delivery). This will benefit both cohorts. Approaches that could achieve this would be adopting a flexible approach, allowing the students to move from the conventional to the e-learning programme and vice versa.

Please select what is appropriate for each of the following sub-areas:

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

D. Conclusions and final remarks

Please provide constructive conclusions and final remarks which may form the basis upon which improvements of the quality of the programme of study under review may be achieved, with emphasis on the correspondence with the EQF.

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:

There is some overlap between the two reports (conventional and e-learning programme) for features and areas that we felt applied to both modes of delivery of the programme.

Specialisations requirements

There seems to be a discrepancy between the e-learning and the conventional version of the programme, in the sense that the two specialisations are only available to the candidates of the conventional programme and not to those of the e-learning programme. We strongly recommend that there is alignment between the programmes in this respect to ensure that the e-learning students have broadly the same experience and student journey as the students in the conventional programme.

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 consider extending the choice of elective courses to give more choice freedom to students. If option 2 is chosen this would also allow the students to have a better choice of electives towards the desired direction of specialisation.

Recommendations

Programme evaluation

- Consider including at least one representative from industry in the Internal Quality Committee, to ensure that the needs of the industry are taken into consideration and regularly updated.
- 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 is particularly important in the e-learning programme to ensure that the student voice is 'heard' and feedback is responded to.
- Define a process to evaluate quality and consistency of pedagogical approach when bigger classes are split into groups and managed by different members of the adjunct staff

Research and teaching nexus

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

Placements/internships

Need to provide further opportunities for skills development in professional practice contexts. The programme team should consider a more explicit inclusion of a placement/internship approach adapted to the needs of each student. This is a key contribution in the current setup of the programme, however this aspect can be problematic for the distance learning students as opportunities for placements and internships may be fewer where they are located.


Assessment

A significant percentage of grades in assessment (50%) is linked to the final exams in the programme. These exams operate mainly in a face-to-face format. An option would be to think about diversifying the assessment to include alternative forms of assessment, e.g., coursework or project-based work.

Interactivity

- The virtual learning environment offers opportunities for interaction; however, these seem to be limited. The committee has not seen examples of innovative use of technology. A network simulator was mentioned in the discussions we had with members of staff.
- The discipline in which the DL/e-learning programme is in requires the use of laboratory based and practical work that could create a disparity between the conventional and the e-learning programme if a justified objective is for both cohorts to have a broadly equivalent experience. There were steps in this direction and the use of a virtual computing lab was mentioned.

E. Signatures of the EEC

Name	Signature
Fabio Crestani	
Nicola Ferro	
Stylianos Hatzipanagos	
Krinos Vasileiou	

Date: 07-03-22