ΦΟΡΕΑΣ ΔΙΑΣΦΑΛΙΣΗΣ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΤΗΣ ΑΝΩΤΕΡΗΣ ΕΚΠΑΙΔΕΥΣΗΣ
ΔΙΠΑΕ CYQAA
CYPRUS AGENCY OF QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION

eqar//// enqa.

Doc. 300.1.1/2

Date: 01/06/2022

External Evaluation Report

(E-learning programme of study)

- **Higher Education Institution:**

  University of Central Lancashire Cyprus (UCLan – Cyprus)

- **Town: Larnaca**

- **School/Faculty (if applicable): SCHOOL OF SCIENCES**

- **Department/ Sector: N/A**

- **Programme of study- Name (Duration, ECTS, Cycle)**

  In Greek:

  Μεταπτυχιακό Δίπλωμα στην Ανάλυση Δεδομένων

  In English:

   MSc Data Analytics (e-learning)

- **Language(s) of instruction: English**

- **Programme's status: New**

- **Concentrations (if any):**

  In Greek: Concentrations
  In English: Concentrations

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].

A. Introduction
This part includes basic information regarding the onsite visit.

The External Evaluation Committee (EEC) had a preliminary remote meeting on 24.5.2022 to discuss the program evaluation process. On 25.5.2022, the EEC visited **University of Central Lancashire Cyprus (UCLan – Cyprus)** online and met faculty members, staff and students remotely through zoom online video conferencing tool in order to evaluate the 1-year (90 ECTS) MSc in Data Analytics (e-Learning program), which is a new program. The visit was arranged and facilitated by Natasa Kazakaiou, representing the Agency of Quality Assurance and Accreditation in Higher Education. Before the online visit, the EEC members were provided with relevant program documents and there were no videos to review, since the program is not operational. The EEC was presented with detailed information about the University and the MSc program. During the site visit, the EEC met University leadership peers and professors, instructors and administrators. It also met current and alumni students from the face-to-face MSc Data Analytics that is operating for the last 5 years, the curriculum of which is the same with the online program to be considered for review in this report

The agenda included several meetings with different stakeholder groups as outlined below:

09.30 – 10.00	Meeting of the committee with the representative of the Agency of Quality Assurance and Accreditation in Higher Education.
10.00 – 11.00	Meeting with the senior management team and course leader. Presentations about the university, school and program under evaluation.
11.00 – 12.00	Meeting with staff responsible for the e-learning platform
12.00 – 13.00	Meeting with the Heads of the relevant departments, the programs Coordinators and the programs coordination Committee.
13.00 - 14.00	Break for lunch and committee discussions related to the evaluations progress.
14.00 – 15.00	Meeting ONLY with members of the teaching staff on each course for the duration of the year(s) of study of the conventional program (Q&A session).
15.20 – 16.00	Meeting ONLY with students and graduates of the conventional program
16.00 – 16.30	Meeting ONLY with members of the administrative staff.
16.30 – 17.00	Tour of the facilities on campus
17.00 – 17.30	Meeting with the Head of the relevant department and the programs' Coordinators - exit discussion (questions, clarifications).

Based on the examination and evaluation of the accreditation materials and the remote site visit, the EEC concludes that the program under evaluation is fully compliant with some standards, and partially compliant with some other standards. The EEC found the design, approval, on-going monitoring and review of the program non-compliant and the present assessment report describes and justifies the above assessment and provides recommendations and suggestions for improving the program under evaluation.

B. External Evaluation Committee (EEC)

Name	Position	University
Eleni Mangina	Professor in Computer Science	University College Dublin, Ireland
Edward W. Sun	Senior Professor of Data Science & FinTech	KEDGE Business School, Campus Bordeaux, France
Carlos Flavián	Professor of Marketing	University of Zaragoza, Spain
Stylianos Hatzipanagos	Professor, Centre for Online and Distance Education	University of London Worldwide, UK
Panagiotis Chrysanthou	Undergraduate Student of Computer Engineering (BSc)	University of Cyprus

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:*

  *<u>**Findings**</u>*

  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.

  *<u>**Strengths**</u>*

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

  *<u>**Areas of improvement and recommendations**</u>*

  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.*

- *<u>**The report may also address other issues which the EEC finds relevant.**</u>*

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.**

ΔΙΠΑΕ
CYQAA

ΦΟΡΕΑΣ ΔΙΑΣΦΑΛΙΣΗΣ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΤΗΣ ΑΝΩΤΕΡΗΣ ΕΚΠΑΙΔΕΥΣΗΣ
CYPRUS AGENCY OF QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION

eqar//// enqa.

- *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 program under evaluation is a 1-year (90 ECTS) MSc in Data Analytics (e-Learning). It is a new program and **it is not in operation.** The program is subject to quality assurance procedures by the University and by the UCLAN - UK. These procedures have a formal status, operationalised by an Internal Quality Assurance Committee. This committee has clearly defined tasks and procedures.

The MSc program under evaluation is designed with overall objectives that have explicit learning outcomes. Students have the opportunity to be involved in the design of the program through their representation in the Internal Quality Assurance Committee. Overall, the program is subject to a formal institutional approval process.

The program design reflects the four purposes of higher education of the Council of Europe. The program is designed so that it enables smooth student progression, and the employability statistics of the conventional identical program are promising. The expected student workload is defined in ECTS; however, the EEC finds that some of the curriculum material is not substantial/adequate for the corresponding ECTS. This point is discussed further down in this section. The program has strong links with industry and provides project opportunities at the companies provided an NDA disclosure for the students. Careful consideration must be taken in the case of e-learning provision on how the industry involvement will take place, so that distance learners benefit from links to industry.

Successful completion of the program results in a qualification that is clearly specified and communicated, although the title of the program can be misleading in expectations on the depth of the curriculum in data analytics. This point is discussed further down in this section.

The content and the learning outcomes of the updated curriculum of the MSc in Data Analytics are not in line with the current standards and expectations in the sector, and it could benefit from some changes. During the online visit it was clearly stated that 30% of the 90 ECTS MSc in Data Analytics are involved with core data analytics content which is not in line with the level of an MSc in Data Analytics. The program structure and course distribution in semesters are clearly and properly identified with a list of courses, although the program title and the course descriptions could benefit from a detailed review process.

The academic staff teaching the courses have the appropriate qualifications, consistently with the program, although there is no official training of the staff involved in online delivery in order to adapt their teaching and learning techniques to the online delivery. Their teaching load is consistent with the sector (40-40-20). The program has

ΔΙΠΑΕ CYQAA

ΦΟΡΕΑΣ ΔΙΑΣΦΑΛΙΣΗΣ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΤΗΣ ΑΝΩΤΕΡΗΣ ΕΚΠΑΙΔΕΥΣΗΣ
CYPRUS AGENCY OF QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION

eqar/// enqa.

invested in staff with potential of career development and enthusiasm to teach in the program, while they are also active in research.

The program was developed to meet the expectations of the local employment conditions in Cyprus. The future employability statistics from the conventional program are promising, although the online offering will attract applicants from all around the world and the employability rate and associated opportunities for students might be different for this program.

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

The small class size of this program, planned for maximum 20 students, allows personal interactions between faculty and students, and efficient monitoring of student progress by faculty members, with appropriate student/staff ratio (18/22). There should be a minimum number of students per class to ensure social online interaction, and to enhance the sense of belonging in a class by distance. The School should consider additional entry requirements for the prospective applicants to have a clear picture of the program objectives.

The EEC could not make any comment regarding student applications, retention, and progression since this is a new program. The EEC recommends for the School to take action and ensure a gender balance for the incoming cohort of students.

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.

Currently there is no specific policy of review process of the program to include the external stakeholders' input in a formal procedure. It is recommended to specify a policy with a target to have the program review panel and aim on reviewing the curriculum. The industry external advisors should have an active role in the reviews since the role of the courses needs to be more strategic in the context of the program in consideration of the current expectations of employers. The EEC recommends that the university enhances the quality assurance practices by engaging and receiving feedback from international or local industry experts in the related field, to assure that the program is enriched with key topics in the field. This will also contribute to the attractiveness of the program. The EEC recommends that student representation is ensured in the internal quality review process (including meetings) at all times. The scope of this review should include an analysis of the learning outcomes of the program to identify who are the exact intake prospective applicants and the content of each course regarding the market needs in Data Analytics and not to create false expectations for the applicants. Special focus should be on the purpose of specific electives and the content of the core courses.

If an industry and/or student representative is not present, the meeting should not take place.

Regarding the curriculum, the EEC recommends two different routes in terms of the title of the program and the content of the curriculum depending on what the learning outcomes are and what the targeted intake of students' background is. The following changes are recommended based on the choice of title of the MSc program:

- o **MSc in Data Analytics:** a series of changes to the curriculum need to take place to ensure that courses not related to the learning outcomes of the program are reduced and the focus is on Data Analytics **if the program is aimed for students who wish to develop a career in data analytics**. For example, in the current curriculum the only modules related to DA are: CO4761; CO4760;

CO4762. The core modules expected within an MSc in DA should provide core modules for the students to demonstrate in depth knowledge in computational methods, including computer programming and scientific visualisation. The EEC recommends the consideration of the following example module titles: Data Programming with R; Statistical Machine Learning; Data Programming with SAS; Data Programming with Python; Predictive Analytics; Multivariate Analysis; Statistical Network Analysis; Time Series; Stochastic Models; Machine Learning and AI. In this case the program would be suitable for graduates from ICT background and need to develop a career in data analytics.

o **MSc in Data Analytics for Business**: EEC recommends that the title of the course should be updated if the aim of the course is for the students to be provided with a set of analytical methods for solving problems to aid decision making in Business within the context of large quantities of data. In this case the program would be suitable for graduates from different disciplines or applicants with practical experience that would like to re-direct their career. Within an MSc in Business Analytics the applicants will be able to apply business analysis tools and apply current research into data science, decision making and management science.

o **In either MSc title** the program director and Teaching and Learning Committee should focus on the in depth skills in data analytics as a learning outcome for the students enrolled (i.e. Statistical methods; Programming for Analytics; Decision and Behavioural Analytics; Mastering Big Data). Minimum entry requirements in terms of Maths and Statistics for the successful student progression during the program and limiting the withdrawal rate.

The EEC also recommends that the process of collecting, analysing and communicating student and other statistics is rigorous and upgraded with gender based data, so that it is digitised, different sources of information are cross-referenced so that contradictions, errors and gaps are avoided, and constructive analytics can be communicated efficiently.

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

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

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

<u>**Sub-areas**</u>

2.2 Process of teaching and learning and student-centred teaching methodology
2.3 Practical training
2.4 Student assessment
2.5 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:*
  - o *Clearly defined objectives and expected learning outcomes of the programme, of the modules and activities in an organised and coherent manner*
  - o *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)*
  - o ***Weekly schedule of interactive activities and exercises (i.e. simulations, problem solving, scenarios, argumentation)***
  - o *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.

The nature of the program is compatible with e-learning delivery. Online interaction with the students is paramount in the distance learning context, particularly for a program like this where the practical component needs to be accommodated. Overall, the EEC is not persuaded that the practical and theoretical sessions are interconnected, and the title of the MSc is misleading and certain recommendations have been made in Section 1 above. The criteria for the methods of assessment and for marking are published in advance although the workload allocation of each course is not provided. The regulations for assessment consider mitigating circumstances.

The program is new, and the program information should indicate in detail the online provision mechanisms. A week-by-week timetable on the program VLE of sessions and activities that students need to attend and engage with would benefit greatly the student journey. Teaching and assessment are focused on developing the ability of students for independent learning of Data Analytics concepts within the Business sector. The panel has seen three examples of online sessions which are indicative according to the program team of the interactivity levels in this program (two lectures and an online lab) implementation of student-centred learning and teaching online could be further enhanced by .

The organisation and the content of the teaching, learning and assessment activities (as described in each of the courses) are in accordance with the expected quality and quantity although the workload is overestimated based on the lack of depth of the materials (as discussed in section 1). When it comes to the scope/aim and learning outcomes, there is a need for some adjustments (as described in section 1). The criteria and mode of assessment are clearly described and published in advance.

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

The curriculum contains the Master Thesis course, which allows collaboration with existing industry links. This is not described in detail in terms of the online provision. A rigorous process of logbook and weekly task allocation with predefined student obligations needs to be included in the case of a thesis work implemented within the industry sector. It is recommended by the EEC to also include the industry hosting organisation obligations (in terms of insurance, hours of work, expectations etc.) if the student works within the industry premises in Cyprus or abroad.

Generally, the program assessment is consistent, appropriate, transparent, objective and supports the development of the learner. Appropriate procedures for dealing with students' complaints regarding the process of teaching and learning are set and adequate numbers of hardware are provided at the labs for the needs of the students. The program also has support for students with special needs. The EEC had the opportunity to review exam papers that demonstrated the transition from closed to open book exams because of the pandemic and this provided an example of good practice which needs to be continued after the pandemic and a push towards authentic assessment. A combination of online proctoring (in place at the university) and assessment design would also support academic integrity and avoid academic offences.

The description of the courses is of good quality, with enough details and appropriate description of the LOs, although specific actions need to be taken as addressed in Section 1.
The EEC could not comment on the communication between students and teachers since the program is new.

Teaching methods are modern, effective, and support the use of modern educational technologies (Microsoft Teams & Blackboard).

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 program could be reviewed in terms of T&L approaches to promote online student-centred learning and increase student autonomy and confidence, which is of high importance for the market needs in Data Analytics. We provided examples of how this can be done further down.

Rigorous internal reporting in terms of the pipeline year on year of students graduating and alumni for future data analysis is highly recommended. This reporting should include the student's progression to industry and academia after the graduation or the advancement of their current career (reporting should be on each academic year and not on the average for all years of operation).

The teaching and learning effectiveness are highly linked with the level of expertise of the teaching staff. All staff have compulsory basic pedagogical training but not sufficient on e-learning. The Associate UK HEA Fellowship that members of staff have the opportunity to receive does not necessarily have a focus on distance and online practitioners. The close relationship with UClan UK would help to address this need for continuous professional development, via the use of joint seminars and workshops.

The recorded sessions from the conventional program included elements of student engagement, active student-learner interaction, student-student interaction, to mention but a few. However, online interactivity should be enhanced further by the use of appropriate technologies (e.g. breakout rooms to allow the students to work in small groups on their own on activities and report back to the plenary) and activities where the lecturer is not always the central focus and peer learning is also facilitated.

Enhancing the practical component using technologies and applications that support running online labs would benefit the students greatly. In the example the EEC reviewed this was done in a 'show and tell' format where the lecturer would present the problem, allow time for the students to work on their own and then reveal the correct answer. A different organisation of the online session (with the use of tools such as computer simulations) would allow greater student input and enhancing the student-centred aspect of the interaction.

Overall, assessment is appropriate, and all grades must be accompanied by written feedback that makes it clear why the specific grade was awarded and that supports the students in learning what their mistakes were and how they could be rectified. A rigorous process is needed within online environments to make sure the students receive feedback on time and there is a line of communication. This should be standard practice for all courses and all forms of homework or examination online.

Although the description and organisation of the courses is of good quality, we noticed that the development of students' competencies and general learning experience could vary, given the admission criteria. EEC advises that the university should take the necessary actions as noted in Section 1 for the review of entry requirements and connect the teaching and learning with real-life challenges and experiences for Data Analytics in Business.

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

Sub-area		Non-compliant/ Partially Compliant/Compliant
2.1	Process of teaching and learning and student-centred teaching methodology	*Partially Compliant*
2.2	Practical training	*Non-compliant*
2.3	Student assessment	*Compliant*
2.4	Study guides structure, content and interactive activities	*Partially Compliant*

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

ΔΙΠΑΕ
CYQAA
ΦΟΡΕΑΣ ΔΙΑΣΦΑΛΙΣΗΣ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΤΗΣ ΑΝΩΤΕΡΗΣ ΕΚΠΑΙΔΕΥΣΗΣ
CYPRUS AGENCY OF QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION

eqar/// enqa.

- *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.

The university ensures that all teaching staff meet the minimum requirements with respect to their educational level and that they are educated in areas very close to the topics they teach. The procedures regarding promotion consider the quality of teaching and research activity of the staff.

There are 18 teaching staff vs. 22 students in the conventional program which is a good ratio for delivering the program. All teaching staff have relevant M.Sc./PhD degrees. From the discussion with the staff, it became clear that everyone is satisfied with the transparent workload model (40-40-20). According to the information provided to the committee, the number of teaching staff is adequate to support the program. The teaching staff rank is appropriate to offer a quality program of study, but further training is needed for consideration of online delivery.

Students evaluate the educational work, and the instructors receive feedback via different routines (via surveys as well as daily interaction and communication).

Research activity is something that all staff members engage in, and it is a required workload.

Strengths

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

The School has followed good practices in terms of recruitment of new academic staff members with potential.

It is very encouraging that staff members are very active in research and there is a rich portfolio of EU funding within the School. The School is commendable for the follow up actions based on the UCLAN-UK Athena SWAN award and the EEC recommends consideration for their own UCLAN-Cyprus Athena SWAN application for Bronze award. It is also recommended based on the balanced gender ratio of the academics to have special arrangements for the female staff upon return from maternity leave (this can be arranged locally with lowering teaching load for at least a semester to encourage the female academics to catch up with the research progress).

It is also commendable that the core teaching staff engage with top-tier research and publications, and the fact that all full time staff take the compulsory training for the Fellowship of the UK Higher Education Academy.

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 School has recruited academic staff and professional development activities for teaching staff focused on the Teaching and Learning skills will prove impactful in the years to follow on the quality of the teaching and learning in the program and the reputation of the program. The panel would advise as well in the future rounds of recruitment to review the curriculum needs of the program and the research strategy of the School in order to identify candidates with potential to progress within your institution. The university tries to improve the teaching skills of the teaching staff through the compulsory training for the Fellowship of the UK Higher Education Academy. These efforts are appreciated.

The EEC recommends having clear documentation in terms of how the research activities of the staff members benefit the curriculum and the teaching and learning activities within this program.
It would be interesting if there were some internal mentoring mechanism through which more experienced professors could guide and mentor less experienced staff when they join the university.

Recently, the master's program has not had any visiting professors. However, the faculty has been visited by several visiting professors through the Erasmus program, who have given opening sessions, specialized seminars, etc. from which staff have benefited.

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

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

ΔΙΠΑΕ CYQAA ΦΟΡΕΑΣ ΔΙΑΣΦΑΛΙΣΗΣ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΤΗΣ ΑΝΩΤΕΡΗΣ ΕΚΠΑΙΔΕΥΣΗΣ
CYPRUS AGENCY OF QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION

eqar// enqa.

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.

During the evaluation of the program the EEC was informed that the graduates from this MSc will receive 2 parchments which is concerning given that the UCLAN-UK is not contributing to the delivery of any of the ECTS provided from the program.

Admission requirements are in place for the program: A Bachelor Degree (lower second class 2:2) or equivalent qualifications and proof of English language proficiency (i.e. at least 6.5 in the IELTS examination) and both of these requirements are clearly communicated. There are allowances for APL entry and the students can apply for APL (30/90). Academic advisors and personal tutors are available to support and monitor student progression. The grading and degree classification systems are comparable to other national and international Higher Education Institutions. The panel has observed that student progression is appropriately monitored and supported by exams and other means of assessment so that students can advance their careers and achieve employability. The School monitors student performance, wellbeing, and supportive services are in place.

There are pre-defined regulations regarding the selection and intake of students. The number of students per cohort is predetermined and the School aims on low student intake (20) to keep the successful mentoring and employability opportunities for the program. The study program is a key element in ensuring the progression of the students, and it clearly defines the overall number and workload of the various courses, and how they are distributed in the 3 semesters. There are also pre-defined and published regulations regarding student progression, and processes and tools to collect, monitor and act on information on student progression, are in place.

The MSc follows the European and International standards in terms of admissions.

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

There is a low student to teacher ratio, which contributes to a positive atmosphere of trust, focused teaching and room for dialogue and support for students. The procedures are clearly described, allowing for transparency, and planning of course management and resource allocation. Given that this is a new program, the EEC did not have access to students of this program. Our discussion with students from the conventional program indicated satisfaction with their experience while studying the program. Students were also satisfied with the support they received overall from the institution, although those that had a computer science background indicated that they would appreciate a more in depth focus on the curriculum as far as development of algorithms for data science were concerned. There is VPN access for the students of the program.

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 teaching staff (particularly those at early stages of their career) could be supported from the Institution with further continuous professional development on e-learning and e-tutoring to enhance their visibility at EU and International level.

The panel also recommends the development of a longitudinal 5-10 year plan for the program and monitoring the intake year on year, in order to plan for recruitment activities in EU and abroad and increase the number of applicants of enrolled students over the next years (if the university wishes to grow the registration numbers).

Some initiatives could be utilised to help attract the right applicants. Examples of such initiatives include: 1) maintaining the gender balance a modern university should have in place by using the current/alumni female students and female graduates as "ambassadors" for the program and include related videos on the School website 2) having a gender-balanced website and external presence of the university in broader activities (Erasmus+), to the extent that this is possible.

To attract larger numbers of students, it may be helpful to review the modules taught with content highly relevant with current data science market needs, and to actively promote and advertise the positive values and high potential of this program to prospective students and relevant stakeholders.

We recommend greater clarity in the program documentation on how research is linked to teaching, particularly with regards to how students benefit directly from staff involvement in research activities.

Although the application is complete, and the plans of the university are coherent (students' admission, progression, and recognition), the potential difficulties in recruiting new students in a competitive higher education environment needs to be tackled. To attract the right intake of students, it may be helpful to review the courses taught (as advised in Section 1) with content highly relevant with the current data science for business industry.

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

Sub-area		Non-compliant/ Partially Compliant/Compliant
4.1	Student admission, processes and criteria	*Partially 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.

The School of Sciences during the online visit described the availability of the server and VPN access to the School, as well as online library and the teaching and learning resources, which can be accessible from anywhere anytime. Overall, the teaching and learning, physical and human resources are adequate to support the current needs of the study program of the School, although the EEC recommends a review of the learning management platforms and the clear methodology and pedagogy of the MSc provision online. If the college plans to increase its program intake, it is important to assess its resources and conduct the necessary adjustments.

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

Student welfare mechanisms for monitoring the sufficiency of student support are in place and EEC recommends including specific mechanisms to have the same provision of welfare mechanism for the online program. It is commendable the gender equality activities and the number of related conferences that take place on campus. The student Experience and Engagement Committee is an important asset for this program. Library services are available, but it is recommended to review the database sources the department has access to year on year, in terms of the most impactful sources for Data Science.

The panel recommends in the future to invest on the teaching staff professional development on e-learning, especially at the early stage of their career, to enable growth for progress. In terms of student support, a potential solution could be a "buddy coder" mentor system in order for students to reach out to students at more advanced years of study (i.e. PhD students that had been graduates of this course. Another solution is to create events during the academic year with student alumni that work in industry to give presentations and emphasise how this program enhanced their career.

The panel comments on the external examiner and the formal T&L Committee to monitor the T&L processes, curriculum review and resources considering the student and staff feedback. It is recommended through official inclusion of the industry advisory Board.

It is commendable the compulsory training of all full-time staff the achievement of Fellowship of the UK Higher Education Academy.

The students are provided with a departmental email account, and communications are enforced through this email, and it is the official channel of email communication with the students.

The School has a rigorous process of data collection in terms of reviewing the pipeline and year on year alumni of the students. Attention should be paid on the diversity and gender balance of the e-learning program.

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.

In terms of student support, in addition to the mentor academic support, a potential solution could be a "buddy coder" mentor system for students to reach out to PhD students that have completed this program or alumni.

The panel also recommends inclusion of a formal industry advisory Board along with the existing External examiner.

The School has a rigorous process of data collection in terms of reviewing the pipeline and year on year alumni of the students. Attention should be paid to the diversity and gender balance of the program.

The Department should periodically assess (every 2 years) the adequacy and suitability of resources and IT platforms and inform the responsible services of the University for their actions.

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

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

ΔΙΠΑΕ
CYQAA
ΦΟΡΕΑΣ ΔΙΑΣΦΑΛΙΣΗΣ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΤΗΣ ΑΝΩΤΕΡΗΣ ΕΚΠΑΙΔΕΥΣΗΣ
CYPRUS AGENCY OF QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION

eqar//// enqa.

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 EEC reviewed and examined the materials provided by the University pertaining to its MSc in Data Analytics e-learning program that is new. The one-day remote (virtual) visit was held on 25.5.2022.

The EEC was presented with detailed information about the program. During the site visit, the EEC met with university leadership peers, professors, teachers, administrators, and current and alumni students of the identical conventional program.

Based on the examination and evaluation of the accreditation materials and the remote site visit, the EEC concludes that most of the standards are met, while some of them are partially met or not met.

The EEC identified the following key strengths:

- The program has a good staff-student ratio, which means that each student can get satisfactory support, although this needs to be reviewed year on year based on the recruitment intake targets for the following years and the strategy plan for growth for the program.
- Staff expertise is consistent with the program of study, with active researchers in the area.
- The University follows the ATHENA SWAN Action Plan from the award provided to the UCLAN – UK and it is commendable the 50:50 gender balance in program team. It is recommended though for the School develops its own action plan to address its own gender equality action items that correspond to the Cyprus campus issues identified (i.e. low number of intake of female students)
- In terms of the curriculum, there is a well-balanced mixture of theoretical and applied topics in this program, although the title of the program is misleading and might create false expectations for the applicants to this program.
- The employability status of the students who completed the conventional program is encouraging.
- The program provides good pastoral care and human support to students but there was no specific information on how this will be implemented for online delivery.
- The teaching staff of this program are overall active in research and supported at this by the college. The EEC recommends considering an action plan for the female staff returning from maternity leave to receive support for at least 1 semester with low teaching load and advancing their research activities.

- It is commendable for the School that recognises the double workload required for the online provision of courses within the program.

- There is a rich portfolio of industry stakeholders within the purposes of internships for the program and the EEC recommends maintaining this level activity and opportunities within the online delivery, although how to implement this need to be addressed, considering that students could be anywhere in the globe.

- The SAS certificate is an attractive parameter for prospective students' applicants.

- The EEC finds commendable that the university provides compulsory UK HEA continuous professional development on teaching to all newly hired or inexperienced teaching staff. This provides reassurance on the quality of the teaching delivery and lead to higher student engagement and interaction. However, no specific training on online/distance delivery is provided. The EEC commends on the transparent and clearly communicated workload model, which is implemented and distributed to all teaching staff.

The EEC also identified several key areas for improvement and therefore, the following recommendations are made:

- The EEC recommends that within their rigorous policy of review of the program the external stakeholders (i.e. industry representative) to be included formally in the process.

- The EEC recommends the review of the entry requirements in terms of the field of background degree. It is clearly presented that the conventional program attracts more students with Maths/computer science background, and it is a very positive development to see 16% of the students have a business background.
- The EEC recommends that student representation is practically ensured at all meetings of the internal quality assurance committee.

- The EEC recommends that the number and gender balance of admitted students is subject to a targeted strategy that needs to be improved and the Athena SWAN Charter in the UK can be of assistance with a number of recommendations.
- A similar strategy to the above should be established to attract higher numbers of students in general, if the School plans any growth in this program.
- The EEC recommends two different routes in terms of the title of the e-learning program and the content of the curriculum depending on what the learning outcomes are and what the targeted intake of students' background is. The following changes are recommended based on the choice of title of the MSc
  - **MSc in Data Analytics:** a series of changes to the curriculum need to take place to ensure that courses not related to the learning outcomes of the program are reduced and the focus is on Data Analytics **if the program is aimed for students who wish to develop a career in data analytics**. For example, in the current curriculum the only modules related to DA are: CO4761; CO4760; CO4762. The core modules expected within an MSc in DA should provide core modules for the students to demonstrate in depth knowledge in computational methods, including computer programming and scientific visualisation. The EEC recommends the consideration of the following example module titles: Data Programming with R; Statistical Machine Learning; Data Programming with SAS; Data Programming with Python; Predictive Analytics; Multivariate Analysis; Statistical Network Analysis; Time Series; Stochastic Models; Machine Learning and AI. In this case the program would be suitable for graduates from ICT background and need to develop a career in data analytics.
  - **MSc in Business Analytics**: EEC recommends that the title of the course should be updated if the aim of the course is for the students to be provided with a set of analytical methods for solving problems to aid decision making in Business within the context of large quantities of data. In this case the program would be suitable for graduates from different disciplines or applicants with practical experience that would like to redirect their career. Within an MSc in Business Analytics the applicants will be able to apply business analysis tools and apply current research into data science, decision making and management science.
  - **In either MSc title** the program director and Teaching and Learning Committee should focus on the in-depth skills in data analytics as a learning outcome for the students enrolled (i.e., Statistical methods; Programming for Analytics; Decision and Behavioural Analytics; Mastering Big Data). Minimum entry requirements in terms of Maths and Statistics for the successful student progression during the program and avoiding withdrawals from an e-learning program.
- The EEC has found the workload of the courses quite low in terms of the corresponding ECTS (10/course currently). The ECC recommends including to each module descriptor how the workload is allocated within each course for activities of 10 ECTS. Based on current descriptions the courses are overestimating the workload for introductory concepts of data analytics and the detailed list of workloads per activity needs to be provided to the course descriptions for students' clarity and expectations.
- The EEC recommends the review of the course descriptors to reflect on the online delivery of each course and address the pedagogy and the teaching and learning techniques to be used in the different activities.
- The EEC recommends that the collection, analysis, and communication of data such as student statistics by the college is digitised and integrated more closely into the management of the program taking into account students' feedback.
- Students will be assigned to mentors, and it is advised a student mentoring scheme that could be addressed through the volunteer work of PhD students

After carefully considering all the facts and evidence provided to the committee as part of this evaluation, the committee believes that the curriculum needs revision before being approved, as suggested by the recommendation made above (especially under section 1&2).

E. Signatures of the EEC

Name	Signature
Eleni Mangina	*Eleni Mangina*
Edward W. Sun	
Carlos Flavián	
Stylianos Hatzipanagos	
Panagiotis Chrysanthou	

Date: 01/06/2022