

Doc. 300.1.2

Date: May 17, 2024

Higher Education Institution's Response

- **Higher Education Institution:**

University of Nicosia, UNIC

- **Town:** Nicosia

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

In Greek:

Υπολογιστικός Σχεδιασμός και Ψηφιακή Κατασκευή (1.5 έτος / 90 ECTS, Μεταπτυχιακό, Εξ Αποστάσεως)

In English:

Computational Design and Digital Fabrication (1.5 years / 90 ECTS, Master of Science, E-Learning)

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

- **Programme's status:** Currently Operating

- **Concentrations (if any):**

In Greek:

In English:



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. Guidelines on content and structure of the report

- *The Higher Education Institution (HEI) based on the External Evaluation Committee's (EEC's) evaluation report (Doc.300.1.1 or 300.1.1/1 or 300.1.1/2 or 300.1.1/3 or 300.1.1/4) must justify whether actions have been taken in improving the quality of the programme of study in each assessment area. The answers' documentation should be brief and accurate and supported by the relevant documentation. Referral to annexes should be made only when necessary.*
- *In particular, under each assessment area and by using the 2nd column of each table, the HEI must respond on the following:*
 - *the areas of improvement and recommendations of the EEC*
 - *the conclusions and final remarks noted by the EEC*
- *The institution should respond to the EEC comments, in the designated area next each comment. The comments of the EEC should be copied from the EEC report **without any interference** in the content.*
- *In case of annexes, those should be attached and sent on separate document(s). Each document should be in *.pdf format and named as annex1, annex2, etc.*

We refer to the report of the External Evaluation Committee (EEC) for the evaluation-accreditation of the MSc in Computational Design and Digital Fabrication programme of study, which was prepared following the onsite visit of the members of the EEC to the University of Nicosia on 12 February 2024.

We would like to thank the EEC for their professional and thorough work during the evaluation. We also appreciate their collegial and constructive approach with which they conducted the evaluation. The MSc programme met all criteria in all areas and the EEC did not identify any significant deficiencies in the quality indicators.

We have carefully considered the EEC's report and set out below our response to each of the issues raised by the EEC. We have set out below our comments on the findings and strengths set out in the report under each area of assessment. In response to the areas for improvement and recommendations made by the EEC, our response and actions taken are set out in column 2 of the table in each section.

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

We welcome the positive and detailed report on all the official steps taken to ensure the quality of our programme. This includes its content, its design, approval, monitoring and review, as well as information on our communication strategies and public information in relation to it. We are pleased to see that the EEC states that “... the content of the program is focused on computational design and fabrication, which is relatively novel and relevant for the education of the 21st century architects. The reviewers appreciate the ambitious and both scientific and societal relevance of the program”.

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>The program ensures to some degree that academic integrity and is vigilant against academic fraud (1.1) but AI is not yet addressed, which leads to (1.1) being partially compliant. The reviewers recommend introducing AI-related considerations to the program.</p>	<p>We have taken significant steps to address the EEC's recommendation on academic integrity and AI-related considerations. We are integrating AI-related ethical topics into existing courses, such as ARCH-571DL "Theory and Evolution of Computational Design" and ARCH-590DL "Research Methodology." Additionally, a comprehensive policy on the use of AI has been developed and approved by the Senate of the University of Nicosia in March 2024 (Annex 1), including provisions related to AI and digital tools. We are now planning workshops and seminars on AI ethics and inviting guest lecturers to provide diverse perspectives at a departmental level. Furthermore, the university is currently building a vertical application based on a foundational model and faculty and staff are being trained in the use of advanced AI (https://accelerate.unic.ac.cy/). Finally, Faculty and Staff are following and get trained from the Technology Enhanced Learning Center of the University of Nicosia provide useful advice on the implementation of AI and how it can be used effectively; e.g. redesign assignments to incorporate AI steps. (https://telblog.unic.ac.cy/artificial-intelligence/)</p>	

<p>Design, approval, on-going monitoring and review (1.2) is designed to some degree by involving students and other stakeholders, there is, however, a discrepancy in expectations, with interviewed students appreciating the course for the possibility to study part-time, while teaching staff requesting full-time participation), which leads to (1.2) being partially compliant. The interview revealed that 4 of 5 students worked in the first year full time and in the last half year part-time; they have chosen the course because of this flexibility. The reviewers recommend to align expectations.</p>	<p>We acknowledge the EEC's feedback on the possibility to offer part-time study. As we explained at the meeting, while the program requires a full-time commitment, its distance learning nature offers significant flexibility, including manageable study schedules, coordinated live sessions, and a substantial summer break. These aspects have been clearly communicated to both students and staff. Additionally, if student numbers permit, we are open to the possibility of introducing a part-time mode in the future to better meet diverse needs.</p>	
<p>The program is designed to enable to some degree smooth student progression, however, with the content and methods involving computational fabrication not having been introduced in BArch and the students having various backgrounds, the smooth progression is a challenge. The reviewers recommend introducing computational fabrication in the BArch / MArch education.</p>	<p>We have taken several steps to address the challenges of smooth student progression from the BArch/MArch to the MSc program. The first semester is designed to accommodate students with little or no prior knowledge, ensuring that all participants reach a certain academic level. In addition. In addition, we have introduced common activities that bring MSc and BArch/MArch students together, mainly through the workshops held at UNIC and UIBK, which provide hands-on experience and foster a shared learning environment. The BArch courses INT-362, "Advanced Digital Design", and ARCH-362, "Advanced CAD and Mixed Media", introduce key concepts and techniques of computational design and provide a strong foundation for those progressing to the MSc program. We are also engaged in ongoing discussions to better integrate Computational Design and Digital Fabrication into the BArch/MArch curriculum, particularly in the 4th and 5th Year Studios. In light of the above we are proposing a Unit with a focus in Computational Design and</p>	

	<p>Digital Fabrication, which would provide more in-depth training and exposure to the field.</p>	
<p>Students' satisfaction with their programmes is to some degree monitored, however, interviewed students expressed the need for more frequent feedback and increased time allocated to the workshops that tutors were not aware of.</p>	<p>Based on the EEC's comments, a number of actions have been taken to address the need for more frequent feedback and increased workshop time as expressed by students. We have established a structured and frequent feedback system, including mid-term evaluations and additional feedback time at the end of live sessions, allowing students to share their experiences and suggestions regularly. In response to requests to extend the duration of the two key workshops, we now offer students the option of arriving a week earlier to participate in blended sessions, which combine physical presence with online activities, until the mandatory 2-week workshop period begins. Improved communication protocols ensure that tutors are fully aware of workshop schedules and content. Furthermore, we have introduced joint activities and workshops involving both MSc and BArch/MArch students, fostering collaboration and providing additional opportunities for feedback. These measures aim to enhance student satisfaction and ensure a supportive educational experience.</p>	
<p>The Environmental Design (10%) presentation in ARCH-582DL Performance Based Design covers climate analysis, process, orientation, daylight, and energy modelling. However, ARCH 592DL is about a computational process or a fabricated building element. This is because delivering full building designs cannot be done in the time that is available, as the Programme Coordinators explained. A suggestion would therefore be for</p>	<p>We would like to thank the EEC members for their recommendation. We agree to expand the Environmental Design presentation in ARCH-582DL "Performance Based Design". Starting next academic year, the presentation will include topics on embodied carbon and life cycle analysis, allowing students to assess the environmental and material impact of their structures.</p>	

<p>the Environmental Design (10%) presentation to cover issues of embodied carbon and life cycle analyses that can then be used to assess the environmental and material impact of the built elements / structures.</p>		
<p>The project criteria in the theses could be more clear and explicit. Structural or environmental parameters from ARCH-582DL could feed into the final theses to form solid criteria.</p>	<p>We also agree with the EEC recommendation to make the project criteria in the Thesis more clear and explicit. We aim to further incorporate structural and environmental parameters from ARCH-582DL into the final Thesis, Design Project Direction, providing solid and well-defined criteria for our students. To align with the recommendation we have updated the ARCH-592DL“Thesis” Course Syllabus to accommodate the above criteria. (Annex 2)</p>	

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

As the EEC noted in its findings: “The nature of the programme is compatible with e-learning delivery, despite the fact that it contains a significant component of face-to-face attendance (four weeks in total) for students both at Nicosia and Innsbruck. This blended aspect of the programme allows the students to acquire the practical skills they need and achieve related learning outcomes. This transition from online to face-to-face interactions seems to be well designed... Quality assurance mechanisms function well, maintaining standards and providing a consistent approach to the design of online and distance learning programmes at the University”. Under strengths the EEC concluded that there was: “Organization and Quality of the programme documentation. There is an appropriate level of detail, particularly in the study guides; Student satisfaction with the programme both from current students and alumni; Support infrastructure for distance learning students in the programme and via the university support services, to accommodate all students inc. those students with special needs, particularly in the context of distance learning; Adequate training and induction opportunities in e-learning particularly for staff and students; A thesis component which puts appropriate emphasis on research methods”. (pp. 15–16).

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>Opportunities to engage with labs at students’ locations should be published widely and linked to career advice the university provides. This should not be a problem considering the university’s international collaborations and will address the students’ concerns that they cannot always find local resources where they study.</p>	<p>We acknowledge the importance of providing opportunities for students to engage with local labs and linking these opportunities with the support services of the university. We have started to maintain a database of internationally renowned labs, including those that our students have researched in the past. This database will be continually expanded. The list will be widely published and easily accessible to students. However, it is to be noted that the process of searching, discovering, visiting and sharing information about labs is an integral part of the introductory courses and educational processes of ARCH-570DL "Digital Fabrication", aiming to reveal traits of the field and maker communities/cultures that might have been unknown to students before participating in the programme. Consequently, the sharing of lab information will occur towards the end of Semester I.</p>	
<p>The small number of students in each cohort makes establishing an active online community challenging. Some strategies have been in place to strengthen this community (e.g. reducing the</p>	<p>We recognize the challenge of establishing an active online community with small cohort sizes. While the proposal to reduce the number of electives could help, we acknowledge that student</p>	

<p>number of electives), however student engagement for such a small cohort could be a problem. This led to partial compliance for 2.1. and 2.4.</p>	<p>engagement remains a concern. To address this, we have introduced more collaborative and interactive activities, and established weekly live sessions in at least one course per semester. These actions, along with the bonding experiences during the two workshops, play a crucial role in fostering a sense of community. Additionally, some of the proposed changes to the curriculum, such as offering a 12-month cycle and a potential part-time option, as suggested by the EEC, aim to make the programme more attractive to prospective students and, therefore, increase cohort numbers.</p>	
<p>The EEC requested to see examples of recordings from interactive online sessions with the students. We reviewed two interactive sessions where tutors worked with students in an online environment.</p>	<p>We appreciate the EEC’s positive feedback on the interactive online sessions. We are committed to maintaining high-quality, interactive learning experiences to foster a dynamic learning community.</p>	
<p>The university has a policy on the use of AI in place and related guidance. We would recommend that the programme team articulated how this is applied to the context of this particular programme both from a disciplinary and pedagogical point of view. This is crucial in assessment and establishing a framework for the use of generative AI in the programme.</p>	<p>We welcome the Committee’s recommendation, which was also discussed during their visit. Following the Senate decision on the University’s AI policy, we intend to implement it within the specific disciplinary and pedagogical context of the MSc programme. We have already started to integrate AI tools into our courses, enabling students to use AI for design exploration, analysis, programming and model generation. Our teaching methodology will use AI to enhance the learning experience, focusing on robust assessment methods that emphasize critical thinking, creativity and practical demonstrations. We are currently working on a comprehensive framework to guide the ethical use of generative AI, ensuring transparency and accountability. We have held and will continue to hold workshops and seminars on AI ethics and best practices to keep</p>	



	<p>students and staff updated on the latest developments. These steps will prepare our students to use AI responsibly and effectively in their academic and professional careers. Relevant material includes a link to a recent AI workshop. (Annex 3)</p>	
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3. Teaching staff (ESG 1.5)

With regard to the faculty, we thank the EEC for noting and pointing out that “the e-learning skills of the teachers seem very good, the University (UNIC) is offering very good support (support for students with online teaching systems and resources) and equipment (online systems, recording cabins etc.), which is utilized and benefits the course”. In addition, and in relation to “Synergies of teaching and research”, they also noted that “through the collaboration with the University of Innsbruck, Professor Marjan Colletti and the Rexlab laboratory, students in the programme benefit strongly from outstanding robotic fabrication facilities”. (p. 20). Finally, the EEC members stated in their report that “Computational / Digital Fabrication in architecture is a growing and high-impact area of teaching and research, it is particularly interesting as a postgraduate course, as offered here”. (pp. 19–20).

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>The course has a high potential to attract high-quality students and to create synergies between teaching and research. Previous alumni of the programme have already continued to do begin a PhD study, unfortunately they could not do this at UNIC and possibly with the tutors from this programme (which would give a particularly interesting opportunity to further develop projects and studies that they already begun at this current programme to be evaluated)</p>	<p>We appreciate the EEC's recognition of the potential of the programme to attract high quality students and to foster synergies between teaching and research. While we are exploring the possibility of a PhD programme in collaboration with the University of Innsbruck, leveraging the expertise of professors from both institutions, our immediate focus is on ensuring that the current programme attracts sufficient students, establishes a strong foundation and is fully integrated into the Department. Once the MScCDDF is firmly established with a consistent and robust student intake, we will be better positioned to develop and launch a collaborative PhD programme within the guidelines of the two institutions and of the CYQAA, thereby providing continuity for our graduates and enhancing our academic and research capabilities.</p>	
<p>Information was given that teaching evaluation is being carried out, analysed and taken into account for the improvement of teaching, but not on how their teaching performance affects their remuneration, evaluation and/or selection.</p>	<p>As we explained to the EEC during the visit, teaching evaluations are carried out, analysed and used to improve the quality of teaching. Detailed policies and procedures on how teaching performance affects faculty remuneration, evaluation and selection are set out in the University's Internal Regulations. Further information can be found in</p>	

	<p>the “Internal Regulations, Chapter Six, Faculty Matters and Policies”. (Annex 4)</p>	
<p>As for qualification, possibly time release and funding could be given to the current staff, to further develop their research qualifications, such as doing a PhD, if research is to be further strengthened.</p>	<p>The EEC’s recommendation is well received. The University supports research by providing Research Time Release (RTR) from teaching workload to faculty members who are engaged in research. Teaching Faculty are normally eligible to apply for RTR if they are formally engaged in doctoral studies and conducting doctoral research. RTR is granted by the Research Committee on an individual basis using the eligibility guidelines and criteria specified in the “Internal Regulations, section 6.5, Policy on Research Time Release (RTR) from Teaching”. For more information please refer to the "Internal Regulations: Chapter Six, Faculty Matters and Policies”. (Annex 4)</p>	

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

The EEC found that “the student admission process for the program is designed to be thorough and inclusive, ensuring the selection of candidates who have passion for the field” and “the programme exhibits a well-structured educational approach, with its primary strength identified in the online/blended mode, offering students the option of part-time participation. This flexibility enables them to effectively manage their study and work schedules. The presence of an easily accessible and user-friendly online platform serves as an excellent resource, where all materials are uploaded, providing students with convenient access to study materials”, and highlighted a number of positive findings about student admissions, processes, criteria, progression and recognition. Under “strengths” the EEC noted that “the shared expertise and courses with the University of Innsbruck provide students with an opportunity to access the global community of computational research and robotic experimentation, to establish connections with leading industrial companies and entrepreneurs to formulate relationships that can lead to their future employment. The students engage with industrial equipment during both academic workshops and can also collaborate with the specific partners during their final research project. In addition, the research-based approach of the program along with the Thesis, provide the foundations for admission to a Doctoral degree in the field or any other relevant/related area”. (pp. 23–24).

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>Recommendations regarding student admissions are being proposed. If applicant numbers increase in the future, a suggestion would be to refine the eligibility criteria by narrowing the scope of accepted fields, recognising that proficiency in certain engineering domains may not necessarily meet the expected standards of the programme. While encouraging diversity in the nature of studies may lead to compelling final results in theses, it is crucial that the chosen field not only embraces diversity but also fosters creativity, ultimately culminating in an inventive and prototype final outcome. Additionally, the committee is considering the inclusion of the foundational degree grade as an evaluation and admission criterion for prospective students, potentially setting a specific grade threshold.</p>	<p>We acknowledge the recommendations regarding the refinement of student admission criteria. If the number of applicants increases in the future, we will consider narrowing the range of [fields (of study) / disciplines / areas] accepted to ensure that all students have the necessary skills to meet the program's standards. While we value a diversity of academic backgrounds, it is crucial to admit students whose prior education is closely aligned with the program's demands. It is important to clarify that there are already entry criteria in place, requiring a foundation degree of Second Class Honours 2:1 or equivalent, although these criteria are not explicitly stated. We have now included the above requirements on the programme website. (https://www.arc.unic.ac.cy/computationaldesign/)</p>	
<p>The second point is related to the progression of the students. The current structure which comprises two weeks of interaction with the</p>	<p>Following the EEC's recommendation to extend the duration of practical sessions to improve learning outcomes, we</p>	

<p>lab in Innsbruck and two weeks at UNIC may be insufficient for the practical components of the course. Extending the duration of these practical sessions has the potential to considerably improve the practical learning experience and, consequently, enhance the overall academic achievement and outcomes of the students.</p>	<p>have introduced an optional additional week for students to arrive early and participate in blended sessions prior to the mandatory two-week workshop periods at UIBK and UNIC. While extending the practical sessions could enhance the learning experience, we must also consider the potential impact on prospective students with work or family obligations or limited financial resources, as a prolonged workshop requirement might deter them from applying. Therefore, our current structure aims to balance sufficient practical training with maintaining accessibility and flexibility for all students.</p>	
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5. Learning resources and student support (ESG 1.6)

The EEC noted positively that “the students and teaching staff are supported by the University in terms of the resources that are available to them, academic preparation, counselling, and special needs access. The online teaching resources on Moodle are adequate and the recorded lectures from the past years are a very important asset of the programme”, and that “the quizzes that are part of the learning material on Moodle are a very good way of testing student knowledge and making sure that students are conscious and knowledgeable of computational design terminology.” (pp. 27–28).

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>There is an inherently contradictory aspect in a distance learning course that partly focuses on fabrication. The students are being asked to establish connections to their local fabrication labs to enable them to carry out their work towards ARCH 570DL, 580DL and 592DL. Although this might work for early stages of their studies in the 570DL module, it also makes it restrictive in terms of the fabrication methods that they can use towards 592DL. This is because large scale fabrication towards the latter depends on the students having adequately sized</p>	<p>We acknowledge the challenge presented by the inherently contradictory aspect of a distance learning course focusing on fabrication. To address this, we confirm that students will be encouraged to spend more time at the University of Innsbruck’s Rexlab facilities, particularly for large-scale fabrication required for Thesis Projects. Additionally, we have active collaborations with industrial partners in Cyprus that possess the necessary equipment. These collaborations provide students with access to relevant fabrication</p>	

<p>spaces wherever they are based at. Two ways around that would be if the Department of Architecture could facilitate onsite robotic fabrication, by purchasing the equipment needed for students to carry out their work adequately, and/or students spending much more time (2 months and/or more) at the University of Innsbruck's Rexlab facilities for fabrication.</p>	<p>tools and create opportunities for academia-practice partnerships, which can be highly beneficial for students pursuing their thesis projects (Annex 5 – Programme Application Industrial Partners). These measures aim to ensure that all students have access to the facilities needed to carry out their work effectively, regardless of their location.</p>	
<p>Regarding recruitment resources, as the student numbers seem to be low, the Department could benefit from a dedicated communications staff member who could promote the MSc online and organise talks and presentations for existing staff in nearby countries (Middle East, northeast Africa, southeast Europe) to advertise the programme and attract prospective students.</p>	<p>We couldn't agree more with the recommendation regarding recruitment and marketing resources. Given the current low student numbers, the Department would greatly benefit from allocating additional student assistant hours to enhance our online presence. Student assistants' responsibilities could expand to include promoting the MSc programme online, with a strong emphasis on social media and content creation. Additionally, we will encourage lecturer talks at other regional and international universities. By leveraging these platforms, we can effectively advertise the programme, engage with a wider audience, and attract prospective students from nearby regions such as the Middle East, Northeast Africa, and Southeast Europe.</p>	



6. Additional for doctoral programmes
(ALL ESG)

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY



7. Eligibility (Joint programme) (ALL ESG)

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY

B. Conclusions and final remarks

The EEC came to the following positive conclusion: “Based on the report provided to us, as well as the site visit on the 12th of February, we unanimously come to the conclusion that the programme entitled “Computational Design and Digital Fabrication (1,5 academic years/90 ECTS, Master of Science, E-Learning, will be positively re-evaluated herewith. We had a very positive overall impression of the programme and university”. (p. 30)

Conclusions and final remarks by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>Computational / Digital Fabrication in architecture is a growing and high-impact area of teaching and research, it is particularly interesting as a postgraduate course, as offered here. For such postgraduate courses, students often have to work, therefore an e-learning course is very helpful.</p>	<p>We appreciate the Committee's recognition and we concur that offering this subject as a postgraduate course is particularly beneficial, especially for students who need to balance work and study commitments. Our e-learning format is specifically designed to provide this flexibility, allowing students to advance their education and skills in this cutting-edge field without compromising their professional commitments. This approach ensures accessibility and inclusivity, catering for a diverse student body while maintaining high academic standards.</p>	
<p>There were discussions about the course becoming more flexible for students who work during their studies (which was already the case for 4 out of 5 students in our on-site interviews), this may conflict with the tutors' demand for full-time teaching and students working on assignments (which is important to achieve learning goals within the course).</p> <p>We recommend trying to find compromises to allow for working students to participate. On another hand, allowing part-time students to study in the programme who work more than one day a week could be detrimental to the output, lowering student work standards, both in terms of quality and quantity. Additionally, although DL makes it easier for students to</p>	<p>We value the Committee's thoughtful discussion on balancing flexibility for working students with maintaining high academic standards. While our e-learning format provides the necessary flexibility, we acknowledge the potential conflicts. We are actively exploring ways to support working students without compromising quality, such as enhancing resources and clear workload guidelines. If student numbers permit, we will introduce a part-time option. Regarding a ground-based MSc option, past experience and local market research suggests that it would be very difficult to attract enough students and therefore this is a direction we opted not to explore. Additionally, we have started integrating digital design aspects into the BArch/ MArch programs to encourage seamless</p>	

<p>attend the programme, it could be discouraging for local students, who might not want to do DL studying in their own country in part-time mode. Could the Department of Architecture offer a parallel ground-based MSc option, to increase student intake and enable extensive fabrication work? And could there be a digital design aspect in BArch / MArch to encourage students to continue studying for the MSc?</p>	<p>transitions to the MScCDDF. These measures aim to balance flexibility, maintain high standards, and cater for a diverse student body.</p>	
<p>The idea of students connecting to local fabrication facilities as part of their assignments is innovative and appears to be mostly working, however this is to be carefully evaluated from an equality point of view. Can students perform without compromise, when such facilities are not available locally?</p>	<p>We agree that access to local fabrication facilities must be carefully evaluated to ensure equality and that all students can perform without compromise, regardless of local resources. In the first semester, students work with commonly available machinery like desktop 3D printers, laser cutters, and CNC machines, all of which are available during the first workshop at UNIC. In the second semester, students visit UIBK and have access to the Robotic Fabrication Facilities. For the thesis phase in the third semester, students are encouraged to spend time at the University of Innsbruck (UIBK) and the University of Nicosia (UNIC) to access advanced facilities (Rex-Lab and industrial) if required by their chosen topic. Additionally, we have started maintaining a database of internationally renowned labs, including those researched by our students in the past. This database will be continually expanded and made widely accessible to students towards the end of Semester I. These measures aim to provide equal opportunities for all students, ensuring a high-quality educational experience throughout the program.</p>	
<p>The committee had a discussion about the placement of architecture within the University of Nicosia,</p>	<p>We appreciate the Committee's discussion on the placement of the architecture program within the</p>	

<p>according to staff this was also a topic of discussion at the department and university. It was discussed that the placement of architecture is generally difficult (social sciences vs engineering), however each decision should be accompanied by measures to balance or compensate for the important subjects and expertise which is outside of the department then. Here this is the case for computer science, engineering subjects such as civil engineering and robotics.</p>	<p>University of Nicosia. While the university does not have a dedicated robotics department, we recognize the importance of interdisciplinary connections. In order to balance and compensate for the expertise associated with the MScCDDF outside of the architecture Department and the School of Humanities and Social Sciences, we are committed to strengthening collaborations with the Departments of Engineering and Computer Science. These connections will ensure that our students benefit from a comprehensive education that incorporates vital elements from these related fields, enhancing their learning and research opportunities.</p>	
<p>Achieving a digital fabrication course through e-learning is challenging, since computational fabrication fundamentally requires the use of laboratories, which has been solved in this course through an innovative course design with two integrated on-site workshops, which allow the students to interact with robots and similar machines, as well as socializing, working as a team and building a physical demonstrator together.</p>	<p>We appreciate the Committee's recognition of the innovative structure of the course design.</p>	
<p>The main strength is identified in the online/ blended mode of the program with the possibility of part-time participation. Of particular relevance is that (1.2) the program benefits from external expertise with tutors from UIBK being involved in teaching the students and the students spending 2 weeks on the UIBK campus.</p>	<p>We appreciate the recognition of the program's strength in its online/blended mode and we will implement the option for part-time participation once the student numbers permit. We acknowledge the involvement of external expertise from UIBK tutors and the two-week on-campus experience at UIBK, an integral part of the programme, adds multiple educational benefits and significantly enriches the learning experience for our students.</p>	
<p>The content of the program is focused on computational design and fabrication, which is relatively</p>	<p>We appreciate the reviewers' recognition of the ambitious and relevant nature of the program.</p>	

<p>novel and relevant for the education of the 21st century architects. The reviewers appreciate the ambitious and both scientific and societal relevance of the program. The reviewers recommend embracing the implicit blended and part-time character of the program and suggest changing the name of the program into ‘Computational Design and Fabrication’.</p>	<p>While we acknowledge and commit in embracing and expanding the implicit blended and flexible character of the program, we prefer to retain the term "Digital" in the program's name to clearly steer away from fabrication processes relying on manual and standardized techniques. Therefore, we believe the name "Computational Design and Digital Fabrication" accurately reflects the program's scope and objectives with a distinctive focus on digital tools and automation.</p>	
<p>The program ensures to some degree that academic integrity and is vigilant against academic fraud (1.1) but AI is not yet addressed, which leads to (1.1) being partially compliant. The reviewers recommend introducing AI-related considerations to the program.</p>	<p>We have taken significant steps to address the EEC's recommendation on academic integrity and AI-related considerations. AI-related ethical topics are being integrated into courses and a comprehensive AI Use Policy was approved by the Senate in March 2024. We are planning workshops and seminars on AI ethics and inviting guest lecturers. The university is building a vertical application based on a foundational model, and faculty and staff are being trained in advanced AI. The Technology Enhanced Learning Center also provides training on effectively implementing AI, such as redesigning assignments to incorporate AI steps.</p>	
<p>Design, approval, on-going monitoring and review (1.2) is designed to some degree by involving students and other stakeholders, there is, however, a discrepancy in expectations, with interviewed students appreciating the course for the possibility to study part-time, while teaching staff requesting full-time participation), which leads to (1.2) being partially compliant. The interview revealed that 4 of 5 students worked in the first year full time and in the last half year part-time; they have chosen the course because of this flexibility. The reviewers recommend to align expectations.</p>	<p>We acknowledge the EEC's recommendation on the possibility of offering part-time study. While the program requires a full-time commitment, its distance learning nature offers significant flexibility, including manageable study schedules, coordinated live sessions, and a substantial summer break. These aspects have been clearly communicated to both students and staff. Additionally, if student numbers permit, we are open to introducing a part-time mode in the future to better accommodate diverse needs. This approach aims to align expectations and maintain the program's accessibility and appeal.</p>	

<p>The program is designed to enable to some degree smooth student progression, however, with the content and methods involving computational fabrication not having been introduced in BArch and the students having various backgrounds, the smooth progression is a challenge. The reviewers recommend introducing computational fabrication in the BArch / MArch education.</p>	<p>We have taken several steps to address the challenges of smooth student progression from the BArch/MArch to the MSc program. The first semester is designed to accommodate students with little or no prior knowledge, ensuring all participants reach a certain academic level. Additionally, we have introduced common activities during the workshops at UNIC and UIBK, fostering hands-on experience and a shared learning environment. BArch courses introduce key concepts of computational design, laying a strong foundation for the MSc program. We are also discussing better integration of “Computational Design and Digital Fabrication” into the BArch/MArch curriculum and considering establishing a dedicated Studio Unit for more in-depth training.</p>	
<p>The Environmental Design (10%) presentation in ARCH-582DL Performance Based Design covers climate analysis, process, orientation, daylight, and energy modeling. However, ARCH 592DL is about a computational process or a fabricated building element. This is because delivering full building designs cannot be done in the time that is available, as the Programme Coordinators explained. A suggestion would therefore be for the Environmental Design (10%) presentation to cover issues of embodied carbon and life cycle analyses that can then be used to assess the environmental and material impact of the built elements / structures.</p>	<p>We agree with the recommendation to enhance the Environmental Design presentation in ARCH-582DL “Performance Based Design”. Starting next academic year, the presentation will include topics on embodied carbon and life cycle analysis, allowing students to assess the environmental and material impact of their structures.</p>	
<p>In terms of Open Data Science, there is no Open Access (OA) policy yet but it is practiced to some degree, hence, OA policy still needs to be established.</p>	<p>We appreciate the feedback regarding Open Data Science. While an official OA policy is yet to be established at the University of Nicosia, we already practice Open Data Science to some degree.</p>	


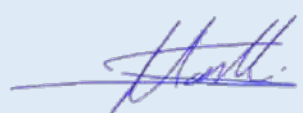
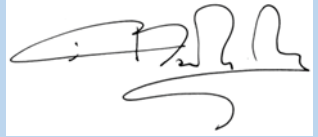
	<p>Faculty publications and Academic Output is shared and openly accessible on online platforms (like Pure and ResearchGate), and open-source software is utilized in the program. Students and Faculty are encouraged to share their code and contribute to the field. Moving forward, we are committed to formalizing and expanding our OA policy to ensure broader and more consistent access to research and data, aligning with best practices in the field.</p>	
<p>The course has a high potential to attract high-quality students and to create synergies between teaching and research. Previous alumni of the programme have already continued to begin a PhD study, unfortunately they could not do this at UNIC and possibly with the tutors from this programme (which would give a particularly interesting opportunity to further develop projects and studies that have already begun at this current programme to be evaluated.</p>	<p>We appreciate the EEC's recognition of our program's potential to attract high-quality students and foster teaching-research synergies. While we are exploring a PhD collaboration with the University of Innsbruck, our immediate focus is on ensuring the MScCDDF attracts enough students, establishes a strong foundation, and integrates fully with the department. Once the MScCDDF is robust and consistently enrolled, we will be better positioned to develop a collaborative PhD program, adhering to CYQAA guidelines, to enhance continuity for our graduates and boost our academic and research capabilities.</p>	
<p>Opportunities to engage with labs at students' locations should be published widely and linked to career advice the university provides. This should not be a problem considering the university's international collaborations and will address the students' concerns that they cannot always find local resources where they study.</p>	<p>We acknowledge the importance of providing students with opportunities to engage with local labs and linking these opportunities to the university's support services. We have started maintaining and expanding a database of known labs internationally, including those researched by our students in the past. This list will be widely published and easily accessible to students. However, the process of searching, discovering, visiting, and sharing information about labs is integral to the introductory courses and aims to reveal traits of the field and maker communities.</p>	

	Consequently, the sharing of lab information will occur towards the end of Semester I.	
The small number of students in each cohort makes establishing an active online community challenging. Some strategies have been in place to strengthen this community (e.g. reducing the number of electives), however student engagement for such a small cohort could be a problem and the programme team should revisit the tools and resources for engaging student cohorts.	We recognize the challenge of establishing an active online community with small cohorts. To address this, we have introduced more collaborative activities and established weekly live sessions in at least one course per semester. These efforts, along with bonding experiences during the two workshops, help foster a sense of community. Additionally, proposed curriculum changes, such as offering a 12-month cycle and a potential part-time option as suggested by the EEC, aim to make the program more appealing and increase cohort numbers.	
The Department could have active strategies (website, social media promotions, online presence, funding lecturer talks in other universities, establishing links to BArch / MArch, increasing flexibility, offering DL and ground-based options) to increase applications and student intake.	We fully agree with the recommendation to adopt active strategies to increase applications and student intake. In coordination with the Marketing Department, we will allocate additional student assistant hours to enhance our online presence through website and social media promotions. Additionally, we will encourage lecturer talks at other universities and establish stronger links with BArch/MArch programs through common activities. Finally, we will advertise a 12-month cycle of the program, and if there is sufficient student interest, we could admit part-time students.	
The university has a policy on the use of AI in place and related guidance. We would recommend that the programme team articulates how this is applied to the context of this particular programme both from a disciplinary and pedagogical point of view. This is crucial in assessment and establishing a programme framework for the use of generative AI in the programme.	We welcome the Committee's recommendation, which was discussed during their visit. Following the Senate's decision on the University's AI policy, we are implementing it within the MSc programme's disciplinary and pedagogical context. We have begun integrating AI tools into our courses for design exploration, analysis, programming, and model generation. Our teaching	

	<p>methodology leverages AI to enhance learning, focusing on critical thinking, creativity, and practical demonstrations. We are developing a comprehensive framework to guide the ethical use of generative AI, ensuring transparency and accountability. Additionally, we will continue holding workshops and seminars on AI ethics and best practices to keep students and staff updated. These steps will prepare our students to use AI responsibly and effectively in their careers.</p>	
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C.

D. Higher Education Institution academic representatives

<i>Name</i>	<i>Position</i>	<i>Signature</i>
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Markella Menikou	Head, Department of Architecture	
Prof. Klimis Mastoridis	Dean, School of Humanities and Social Sciences	

Date: 17/05/2024

