Doc. 300.1.2

Date: 05/05/2021

Higher Education Institution's Response

- **Higher Education Institution: European University Cyprus**

- **Town: Nicosia**

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

  In Greek:

  Ιατρικές Επιστήμες (3 Έτη/180 ECTS, Διδακτορικό)

  In English:

  Medical Sciences (3 Years/180 ECTS, Doctor of Philosophy)

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

- **Programme's status:** New

- **Concentrations (if any):**

  In Greek: Concentrations
  In English: Concentrations

ΚΥΠΡΙΑΚΗ ΔΗΜΟΚΡΑΤΙΑ
REPUBLIC OF CYPRUS

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 300.1.1/2 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.*

- *In particular, under each assessment area, the HEI must respond on, without changing the format of the report:*

    - *the findings, strengths, areas of improvement and recommendations of the EEC*
    - *the conclusions and final remarks noted by the EEC*

- *The HEI's response must follow below the EEC's comments, which must be copied from the external evaluation report (Doc.300.1.1 or 300.1.1/2 or 300.1.1/3 or 300.1.1/4).*

- *In case of annexes, those should be attached and sent on a separate document.*

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

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Findings

1.1 Policy for quality assurance

The program has not yet been launched for recruitment, and understandably no information is publicly available. However, it seems well anchored in the organization at EUC and the Medical School, taking advantage of very clear academic quality standards. This includes an internal evaluation organization, with an established and organized approach to academic standards, equality and diversity, and the involvement of different external stakeholders. There is a clear plan for active review during the first iteration of the programme, using a verry limited student cohort.

> We would like to thank the EEC for recognizing that the Medical School and EUC have many specific policies and procedures for quality assurance, that will be able serve the PhD program. These include several committees (School Quality Assurance Committee, EUC Quality Assurance Committee, Advisory Boards, etc.) with inclusion of multiple stakeholders such as external experts and students, to ensure continuous external and internal monitoring of the educational program and standards. We are pleased that the EEC acknowledges that based on the rich experience of the School, the program was able to devise a clear plan for review during the onset of the program. As indicated by the EEC, all information regarding recruitment will be made publicly available once the program is launched.

1.2 Design, approval, on-going monitoring and review

The programme has strong strategic alignment with the Medical School and University, and is targeted at a broad student background, with a clear understanding of the multiple careers that may follow a PhD (increasingly targeted at commercial research and industry). As such, the ethos and design of the programme are grounded with introductory taught components (techniques and research methods), in advance of the main body of research. The design of the program is described in detail and includes appropriate objectives. There is a link to external competencies within medical research, aligned with EUC's intention to market the programme for international students.

The purpose of the program is aligned with strategic growth of the Medical School and is well explained and appropriate in this context. 30 ECTS of short courses are mandatory for all new doctoral students, and their focus and breadth is appropriate (although ILOs are somewhat lengthy for these modules). Subsequent monitoring and reviews are planned throughout early iterations of the programme, with a strong sense of learner community. There are clear processes in place for internal approval.

> We would like to thank the EEC for the comments and for acknowledging our concerted efforts to target students, not only with a divergent background, but also who have a multiplicity of potential career paths. As noted above, we have established policies and

processes for program evaluation and application of appropriated modifications, which are strategically aligned with the Medical School.

1.3 Public information

Public information is not yet available but is planned within standards at the Medical School and EUC.

As noted by the EEC, at the onset of operation of the program, all relevant information of the program will be made public, within the standards of the University and Medical School.

1.4 Information management

Information from the program activities and its management is planned but is not possible to evaluate at this stage. Staff seem to be well engaged in the planning, with commitment at all levels of the university.

We appreciate the EEC's acknowledgement of our efforts to embrace and engage our faculty, staff and students in the development, planning and functions. All information regarding program activities and management will be made available as the program initiates its operation.

<u>Strengths</u>

1.1 Policy for quality assurance

The program is well anchored and has a strategic role within the Medical School's portfolio of programmes. Within EUC itself, it benefits from being part of a robust quality assessment organization at institutional level. There are clear processes with EUC for faculty pedagogic development.

As noted above, we would like to thank the EEC for recognizing that the Medical School and EUC have many specific policies and procedures for quality assurance, that will be able serve the Ph.D. program.

1.2 Design, approval, on-going monitoring and review

The design of the program is described in detail. The mandatory taught components are well conceptualised with an excellent mix of methods, technical and academic skills training within both the Medical School and support in EUC. The programme design, and multi-stage review of students are designed with a strong focus on support, retention and achievement of students, with a good understanding of the challenges faced by doctoral students. As noted, there is a palpable sense of learner community within the programme that will benefit teachers (through better understanding of learners) and students.

Staff engagement at all levels of the programme is strong, drawing on a cadre of internationally recognised teachers and supervisors.

We are truly pleased that the EEC found the program well conceptualized, and includes appropriate focus on student support and their preparation for their future roles. The Medical School, and as a result the Medical Sciences Ph.D. program, are strongly based on the sense of "team" and "community", which we believe will facilitate continuous development of the program to ensure its on-going alignment with international standards.

1.3 Public information
NA

1.4 Information management

NA

Areas of improvement and recommendations

1.1 Policy for quality assurance
None

1.2 Design, approval, on-going monitoring and review

The program includes 30 ECTS courses at the outset, and therefore 3 (accepted?) publications within the theses as requirement could represent an excessive demand on students. It will be important to monitor this carefully in the early stages of the programme.

We agree with the EEC concern that three (3) publications (accepted) may be an excessive burden on our graduate students. Based on consideration of these concerns, the requirement will be revised to include two (2) publications (submitted), and with presentation of work at, at least, one (1) international conference. As recommended, we will carefully monitor course performance, research output, and development of our initial student intake very carefully.

Modular ILOs for the 30 ECTS programme appear long and need reframing at an appropriate level. It would be worthwhile consolidating these, perhaps as core ILOs, to ensure alignment with student activity and assessment.

In accordance with the EEC's suggestion, we have made a concerted effort to consolidate and reframe the ILOs to better ensure their alignment with student activity and assessment (please see Appendix I: Course Syllabi).

1.3 Public information
NA

1.4 Information management

NA

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

Findings

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

As noted, there is a strong focus on learner support and transition throughout each stage of the programme. Learning resources for the 30 ECTS modules appear comprehensive, and the methodology proposed for these courses and research practices will encourage students to take an active role and it is thought to support and guide students for their development.

We have made a concerted effort to design a program that encourages our students take an active role in the courses, and research with the support of faculty and external experts. We are pleased that the EEC acknowledges our effort to provide strong leaner support throughout each stage of their development.

A comment has been made in section 1 about expected learning outcomes of the modules; the programme overall seems coherent. This sub-area is somewhat not possible to evaluate science the program is not yet operating, such as schedules, feedback, and interactive activities. The EEC assume the medical school have a series of community events planned throughout the programme (journal clubs, mock abstract presentation, peer review) which will help develop a strong sense of peer support amongst students.

As correctly noted by the EEC, the Medical School will host a series of events throughout the program, including, journal clubs, research presentations by students, expert lectures, among others to both develop a community of scientists and critical thinkers and enhance peer support. As noted above, we have reviewed and revised the ILO to be better aligned with student activities.

2.2. Practical training

Practical studies are clear within the research part of the programme.

Practical training is a critical component of the programme, and we are pleased that this was evident to the EEC.

2.3. Student assessment

An assessment framework is in place, including defined evaluation criteria and methods, and procedures for student appeals seems to be in place. Several aspects of student assessment are not yet known, such as whether the assessments are fully aligned to teaching content, and transparent (primarily in respect of the 30 ECTS short course modules). The assessment criteria/rubrics for reflective components/assessment for learning is not fully described.

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Assessors' competence draws on Faculty's existing experience in the School's MD programme, with good evidence of research and PhD supervisory experience.

We agree with the EEC that while the Ph.D. program does have a well-defined assessment framework, there are several aspects that remain unclear, such as alignment of assessment and content in courses. We also agree that the assessment criteria for reflective components of learning have not yet been fully described. The School of Medicine is in the final stages of completing an E-Portfolio project for undergraduate medical students, graduate students and faculty. The School welcomes the addition of portfolios and personal development plans for our students. With this in mind, we have devised a comprehensive portfolio to monitor our students' performance, that includes systematic reflection, with the ultimate aim to promote guided reflection and feedback and enhance performance. A pilot study of our E-portfolio is intended in the Fall 2021, with hopes to implement by early 2022.

Strengths

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

Multiple supervision and review points.

As noted by the EEC, we have included multiple supervision and review points in the program. We will monitor the effectiveness of this structure with the first cohorts of students.

2.2. Practical training
The EEC noted and commend the opportunity for students to act teaching assistants,

We agree with the EEC that there are several benefits for graduate students when they act as teaching assistants, including public-speaking, management of people via monitoring and assessing junior students, time-management, among others.

2.3. Student assessment

A fairly robust assessment framework, even though the program has not yet started. Several aspects of student assessment needs attention during the practical implementation.

We would like to thank the EEC for their comments. While we have attempted to devise a comprehensive assessment framework in the Ph.D. program, we agree that we will need to review processes in the early stages of its implementation.

Areas of improvement and recommendations

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

To encourage students to formalise their research practice, the School should consider some form of longitudinal e- portfolio or diary.

We agree with the EEC and the School of Medicine fully embraces the inclusion of an E-Portfolio. As noted above, the School is in the final stages of completing an E-Portfolio project

for undergraduate medical students, graduate students and faculty. The School welcomes the addition of portfolios and personal development plans for our students. With this in mind, we have devised a comprehensive portfolio to monitor our students' performance, that includes systematic reflection, with the ultimate aim to promote guided reflection and feedback and enhance performance. A pilot study of our E-portfolio is intended in the Fall 2021, with hopes to implement by early 2022.

Several parts of the program such as feedback and interactive activities needs attention during the implementation, including a dialogue with students.

Feedback and interactive activities are an important part of the professional development of our Graduate Students. We agree with the EEC that this will require special attention during the program outset.

Within the first semester, the Supervisory Committee will meet with the student to review the scientific quality of the research project, whether the project may reasonably be expected to result in a dissertation of the required standard within the defined timeframe, the degree to which the project encourages innovation and creativity, the qualifications/compatibility of the nominated supervisory and define clear timepoints to evaluate the progress of the research. More specifically, as presented during the site-visit, the Supervisory Committee, will host a minimum of three (3) formal sessions to evaluate the progress of the research and support students over the course of their dissertation. The Supervisory Committee will consist of the Supervisor (if the supervisor is an external expert, this will include an EUC faculty member as co-supervisor) and two (2) faculty members relevant to the topic. An external expert is strongly encouraged to be on the Supervisory Committee.

Specifically, these formal meetings are planned to discuss the research proposal, discuss performance, review coursework performance, discuss and plan for teaching duties, present and discuss progress of research project, among others. During the 1st Committee Meeting (~6 mo), the aim is to present and discuss the research proposal, discuss the performance during the initial period, review coursework performance, and present plan for teaching duties. For the 2nd Committee Meeting (~18mo), the student must provide a written progress report to members. The meeting includes a presentation and discussion of research, data and future research plans to complete study; a defense of data and strategy by the student; feedback about performance, review of coursework completed and review of teaching assignments. For the 3rd Committee Meeting (~24-30mo), the student must provide a written progress report to members. The student presents the research project, background, data, data interpretation, and future research strategy; the student defends data and strategy, and receives feedback about performance and teaching assignments.

At the end of each semester, the School will host regular open sessions with the first students for informal dialogue and feedback. As had been achieved with the undergraduate Medical program, students will be embraced in the process of addressing the Ph.D. program by the collection of qualitative data from student interviews by the program coordinator. These will not be structured, but will explore the feelings and perceptions of the students regarding the Medical Science Ph.D. program.

The student workload needs careful monitoring when the programme is starting up.

We agree with the EEC that we will need to monitor the workload throughout the beginning of the program. We believe that the open discussion sessions and e-portfolios noted above, will provide ample feedback, allowing us to make modifications, where and when necessary.

The program could benefit from the implementation of specific strategies aiming for the creation of a community of practice among students, such as a monthly half day series of seminars or journal clubs. Communities of practice are efficient to nurture mentorship, foster knowledge creation and sharing and create a shared identity with a sense of belonging, all conductive of life-long learning. Such activities will help student identity, both in the initial cohorts, and when the programme.

We are in complete agreement with the EEC on the need to create a community of practice and enhance life-long learning skills. As noted above and during the site-visit, the School intends to regularly host a series of events throughout the program, including, journal clubs, research presentations by students, expert lectures, among others to both develop a community of scientists and critical thinkers and enhance peer support.

More specifically, students will be requested to present either their research (research seminar) and/or related state of the art study/bibliography (journal club) on a regular basis. Bi-weekly, formal sessions required by all graduate students and open to all medical faculty, medical students and interested parties from other health sciences, will take place. Each graduate student will be scheduled to present their research and one journal club presentation each semester. These sessions will also be used for graduate students to present rehearse any presentations intended for scientific meetings.

In addition, external experts will be invited to for guest lectures. This will serve not only for the guest scientist to present their studies, but more importantly to give the opportunity for our students to interact with open, inquisitive dialogue. Based upon the final approval of the program, among the scientists will includes experts, such as Professor Konstantinos Stratakis (former Director of National Institute of Child Health & Human Development known for his clinical studies), Professor Achilleas Gravanis (Professor of Pharmacology known for his innovative projects such as "brain on a chip"), Professor George Chrousos (among the most highly cited scientists, known for his basic science, as well as clinical studies), and Dr. Popi Kanari (President of the Karaiskakion Foundation with one of the largest data banks for hematological malignancies).

Collectively, the interdisciplinary dialogue provided by external experts invited for lecture and discussions, as well as the regularly scheduled meetings of graduate students and faculty to present research seminars and journal clubs, we believe will encourage the development of communities of practice, by promoting analysis, reasoning, evaluation, communication, teamwork, and critical thinking – all essential for scientific viability.

2.2. Practical training

None

2.3. Student assessment

Some aspects of student assessment are not yet known; revision of the ILOs of the taught components in particular will require careful alignment/blueprinting with planned assessment

We agree that assessment will need to be carefully reviewed in the onset of the program. In accordance with the EEC's suggestion, we have made a concerted effort to consolidate and reframe the ILOs to better ensure their alignment with student activity and assessment.

3. Teaching staff
(ESG 1.5)

Findings

3.1 Teaching staff recruitment and development

There is a strong commitment (within both the EUC and the School of Medicine) to supporting staffing provision for the programme. Teaching staff are drawn from the School of Medicine, and have varying degrees of practical expertise in medical research, the instruction of undergraduate medical students and in some cases, academic qualifications in medical/health professions education. There is a strong process of faculty development internally within the University which is to be commended.

> We are grateful to the EEC for acknowledge both the School's and the University's effort to support faculty development. As the School grows and matures, it will continue to make the effort to monitor the needs for new recruitment of staff and faculty, as well as processes to ensure their development.

3.2 Teaching staff number and status

In the site visit discussions, the School of Medicine noted that it would be recruiting additional support (e.g., qualitative research methods teachers). The Inventory of Faculty Supervisors and Co-Supervisors are significant.

> As noted by the EEC and as presented during the virtual site-visit, the School has recently recruited a Professor of Medical Research who will be starting in the Fall 2021. The School also intends to include junior research support staff, as well. As the School grows, the aim will be to recruit additional faculty, with focus on their research profile and ability to support the research training, maturity and output of medical students (who are required to do a Medical Thesis), graduate students, post-doctoral students and faculty.

3.3 Synergies of teaching and research

There are strong connections between teaching and research across the institution, and within the School of Medicine. The EEC noted, and congratulate, the School of Medicine on its strong international networks (at colleague and institutional level), which present ideal opportunities to support research supervision (e.g. with external supervisors), speaking and teaching events and opportunities for student mobility.

> Over the last years, the School has made a sincere effort to strengthen the synergy between teaching and research with the introduction of courses for research development, inclusion of a Medical Thesis, among others. We are grateful that the EEC acknowledges that the School has also made an effort to augment the strength of its International Network, with the aim of providing opportunities for collaboration and mobility.

> As described above, guest scientists will be invited to present their studies, but more importantly to give the opportunity for our students to interact with open, inquisitive dialogue.

Based upon the final approval of the program, among the scientists will includes experts, such as Professor Konstantinos Stratakis (former Director of National Institute of Child Health & Human Development known for his clinical studies), Professor Achilleas Gravanis (Professor of Pharmacology known for his innovative projects such as "brain on a chip"), Professor George Chrousos (among the most highly cited scientists, known for his basic science, as well as clinical studies), and Dr. Popi Kanari (President of the Karaiskakion Foundation with one of the largest data banks for hematological malignancies).

Collectively, the interdisciplinary dialogue provided by external experts invited for lecture and discussions, as well as the regularly scheduled meetings of graduate students and faculty to present research seminars and journal clubs, we believe will encourage the development of communities of practice, by promoting analysis, reasoning, evaluation, communication, teamwork, and critical thinking – all essential for scientific viability.

Strengths

3.1 Teaching staff recruitment and development

There is a strong ethos of clinical experience within the core Faculty, all of whom are active teachers and contributors to the School's MD programme, and well established in clinical oriented medical research.

We would like to thank the EEC for their observation. We hope to continue in this vein, as the School develops across the years.

3.2 Teaching staff number and status

The number and qualifications of Faculty Supervisors and Co-Supervisors.

As the School has matured across its recent history, it has made and will continue to make a focused effort, to recruit qualified faculty, so as to augment the breadth and depth of the scientific disciplines and remain aligned to current thought in medical science.

3.3 Synergies of teaching and research

Strong institutional and School cultures to ensure harmonisation of teaching and research, and as noted, the strength of collaboration between academics and also between institutions

We would like to thank the EEC for this observation. The School ardently supports the synergy between teaching and research, and looks continuous towards strengthening its external network.

Areas of improvement and recommendations

3.1 Teaching staff recruitment and development

None

3.2 Teaching staff number and status

At this early stage of the programme, consideration needs to be given to the use of a broader pool of visiting experts in medical research, as well as enabling local faculty, by leveraging external networks.

We totally agree with the EEC's comment. We will tap into our existing international network, as well as new collaborations to invite a broader spectrum of international experts in medical research to participate in our program. This will be in the form of invited lectures, as discussed above, but also for their inclusion in supervisory committees as well as for student mobility and training.

In addition, to the above, however, the program will be able to introduce graduate students to a broader pool of international research experts through its Externship Program. As an international academic entity, European University Cyprus School of Medicine has encouraged and promoted agreements with international hospitals and research institutions of the highest calibre for EUC student **summer externships**. These are available for Medical Science graduate students. The externship experience promotes the idea of employability and allows students to gain experience in environments and countries that they wish or expect to work in the future.

The externship program is also an opportunity to create and strengthen relations between EUC students and faculty with international clinical/research centers. Many of the Student Summer Externships offered by EUC School of Medicine are at internationally renowned research centers (please see relevant agreements in Appendix II). A recent addition to the extensive list of summer research opportunities for EUC medical students is the ability for a summer externship of eight (8) weeks at the Weizmann Institute of Science, Hebrew University of Jerusalem in the laboratory of Nobel Laureate, Ada Yonath.

With the opportunity to participate in summer externships in prestigious highly ranked institutions all over the world for additional basic or clinical research training, we believe that Medical Science graduate students will greatly enrich their experience with the opportunity to learn not only from a large pool of experts, but in a wide variety of environments.

3.3 Synergies of teaching and research

Active engagement with external colleagues and institutions could support the research component of the programme, as medical research outputs are not yet a major strength of a young School. This could take the format of formal teaching as well as supervision.

We agree with the EEC that research remains in an early stage of development at the School, and is expressed in the fact that our research output is not yet a major strength. As noted

above, however, over our short history we have made a strong international network, both at the colleague and institutional level. We intend to exploit this international network in order to bring in experts in the field for lectures and teaching, but more importantly to supervise in research work and dissertations. To this regard, the Program strongly urges that the dissertation committee includes an external (international) expert in the field.

As noted above, active engagement with external colleagues and institutions to support the research component of the program will be leverage with our Externship Program. Specifically, in addition to invited external expert lecturers, the program will be able to introduce graduate students to a broader pool of international research experts through its Externship Program. As an international academic entity, European University Cyprus School of Medicine has encouraged and promoted agreements with international hospitals and research institutions of the highest caliber for EUC student **summer externships**. These are available for Medical Science graduate students. The externship experience promotes the idea of employability and allows students to gain experience in environments and countries that they wish or expect to work in the future.

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

Findings

4.1 Student admission, processes and criteria

EUC has strong institutional processes which are clearly documented in guidance to students, and clearly understood by staff. Processes were compliant with local regulations and in meetings with colleagues, excellent standards of practice were noted in respect to student admission, including approaches to dealing with the recognition of prior learning (RPL). The EEC felt this represented good practice.

> We would like to thank the EEC for this observation, as EUC and the School aim for transparent and fair admission processes.

4.2 Student progression

Not yet in place, but a clear plan to monitor student progress closely in the early cohorts of the programme.

> As correctly noted by the EEC, the School and the program intends to monitor the first student cohorts closely, with continuous open discussions as well as e-portfolios (please see above). This will allow us to examine the student workload, any difficulties with training, areas to improve, appropriateness of student Supervisory/Advisory Committees, assessment, among others. Monitoring and review of the program will be continuous.

4.3 Student recognition
Adequate institutional processes in place.

> The University and the School have worked to ensure that the degree is in line with European and International Standards.

4.4 Student certification
Institutional processes for management of RPL are clear (although not applicable for PhD programmes)

> The University has a clearly defined procedures of recognition for prior learning.

Strengths

4.1 Student admission, processes and criteria

The fact that there is a plan to recruit students from different contexts will bring diversity and help the programme flourish.

The program hopes to recruit students from both different cultural, as well as scientific backgrounds. We agree with the EEC that this multi-cultural, but more importantly multi-disciplinary background will enrichen the program and student experiences.

4.2 Student progression

NA

4.3 Student recognition

Clear, institutional processes for the management of RPL. A strong, and experienced central team of expert administrative, technical and library colleagues.

The University and School are very proud to have an exception team of administrators, technical support and librarians to support the program and ensure the quality of training that the students receive.

4.4 Student certification

NA

Areas of improvement and recommendations

4.1 Student admission, processes and criteria

Prior review of the submitted material, as well as the meetings in the online site visit raised no concerns, and strong University practices. We have noted student progression as 'not applicable' as there are currently no students on the programme. The number of students may in later cohorts be larger.

As noted by the EEC, the program intends to closely monitor cohort intake to reflect the number of faculty qualified to supervise students, and the number of graduate students that can be effectively supervised by each supervisor. As noted above and by the EEC, the School has recently recruited a Professor of Medical Research who will be starting in the Fall 2021. The School also intends to include junior research support staff, as well. As the School grows, the aim will be to recruit additional faculty, with focus on their research profile and ability to support the research training, maturity and output of medical students (who are required to do a Medical Thesis), graduate students, post-doctoral students and faculty.

As noted by the EEC, the program intends to have a smaller cohort in the program initially, to better allow for careful monitoring of student progression, etc., as noted above. Depending upon the number of available supervisors, the number of students may increase in later cohorts.

The program would benefit from recruiting students from different the health professions such as physiotherapists, and nursing. The medical field is multidisciplinary by nature and benefits from different academic and research traditions.

We totally agree with the EEC's comment. We truly believe in the multidisciplinary nature of modern medical science and as such, recruitment of students will include graduates not only from various health professions, but also from basic science fields. We believe that this will enrich student experiences collectively, as well as augment the overall output and significance of the research performed

4.2 Student progression

NA

4.3 Student recognition

None.

4.4 Student certification

None.

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5. Learning resources and student support
(ESG 1.6)

Findings

5.1 Teaching and Learning resources

Based on the material submitted to the EEC, these appear comprehensive and well planned.

The School and University have developed a spectrum of teaching and learning resources that are readily available for both students and faculty.

5.2 Physical resources

In general, the physical resources are significant and adequate. At the school the resources seem to be fit for purpose and well rated amongst students.

While the physical resources are very adequate to serve the needs of the School and program, the School carefully monitors these resources to develop and augment as required.

5.3 Human support resources
Human support resources seem adequate.

The School and Program are pleased to have the appropriate HR support, as noted by the EEC.

5.4 Student support

Student support appears very well established at EUC and the School of Medicine, and available for supporting a diverse student population, and fairly well adapted to distant learning students. The School and University have a well considered approach (and experience) to supporting doctoral students to improve retention and academic outputs.

The School and University have focused on providing strong student support for a very international student body and a multiplicity of teaching modes. We are very pleased that this is recognized by the EEC.

Strengths

5.1 Teaching and Learning resources

The EEC were very impressed by student ambassadors and the very positive discussions about the quality and engagement with excellent learning and teaching resources. This was particularly notable in respect of students wishing to continue postgraduate study at EUC.

We are extra-ordinarily proud of our students and graduates, and particularly thankful to the EEC for their comment.

5.2 Physical resources

Extensive and modern physical resources. EUC should be proud of its impressive physical space (and in particularly laboratories)

The School makes a concerted effort to review and update all resources and infrastructure, so as to remain updated and effective for its teaching and research needs. A constant strategy has been to maintain excellence in our infrastructure necessary to deliver our program.

5.3 Human support resources

-
5.4 Student support

A well-established system at the school, with a very experienced central EUC team. A strong focus on career support (including designing the programme to maximise career opportunities at post-doc level) is commendable, as are the plans for regular student progress reviews.

As noted above, both EUC and the School have focused on providing strong student support for a very international student body and a multiplicity of teaching modes. We are very pleased that this is recognized by the EEC.

Areas of improvement and recommendations

5.1 Teaching and Learning resources

None

5.2 Physical resources
None.

5.3 Human support resources

None.

5.4 Student support
None.

6. Additional for doctoral programmes
(ALL ESG)

Findings

6.1 Selection criteria and requirements

Specific criteria for admission to the program, and the selection procedures are well defined. Relevant requirements for the program are published, such as time frames, different stages, procedures for accepting the student's proposal, and examination criteria.

> We would like to thank the EEC for this observation, as EUC and the School aim for transparent and fair admission processes. As noted above, the program hopes to recruit students from both different cultural, as well as scientific backgrounds. We agree with the EEC that this multi-cultural, but more importantly multi-disciplinary background will enrichen the program and student experiences.

6.2 Proposal and dissertation

Adequate guidelines for the proposal and the dissertation are set, e.g., the structure, volume and final evaluation procedures, and a plagiarism check system.

> In designing the program, the School has made a sincere effort to clearly define all guidelines for the proposal and dissertation, as well as to provide an adequate checking system for plagiarism.

6.3 Supervision and committees
The procedures for the advisory, as well as the examining, committee are clear and determined.

> The procedures for the supervisory/advisory and examining committees have been clearly defined and are in accordance to University, National Agency, as well as International guidelines. As noted below, the program will examine the implementation of a mentoring system, as has been done in other Ph.D. program with success.

The duties of the advisory committee are clear and include regular reporting, writing research papers and conference participation.

> We are pleased that the EEC recognizes that the School has attempted to provide clear roles and duties for the Supervisory/Advisory Committee. As we carefully monitor the first cohorts of students, these will be further defined. As noted above, and in accordance with the EEC's recommendation, the number of publications required of Ph.D. candidates has been decreased from three (3) to two (2).

Strengths

6.1 Selection criteria and requirements

Specific criteria for admission to the program are well defined. Structured and relevant requirements for the program.

As noted above, the EUC and the School aim for transparent and fair admission processes. We intend to recruit students from both different cultural, as well as scientific backgrounds. We agree with the EEC that this multi-cultural, but more importantly multi-disciplinary background will enrichen the program and student experiences.

6.2 Proposal and dissertation

Adequate guidelines for the proposal and the dissertation are set.

The Program has fully developed guidelines for both the proposal and dissertation. Graduate students entering the program will receive a document sharing the guidelines for the proposal and dissertation.

6.3 Supervision and committees

The procedures for the advisory, as well as the examining, committee are clear. There is a clear culture that seeks to ensure healthy supervisory relationships and faculty insight into student progress.

We have attempted to clearly define procedures for the Supervisory/Advisory and Examination committees. The program intends to encourage regular meetings and support mechanisms to augment a productive and healthy supervisory relationship between students and faculty. We believe that with the introduction of the E-portfolio, as well as student feedback we will be able to further foster productive and healthy student-supervisory committee relationships.

Areas of improvement and recommendations

6.1 Selection criteria and requirements

The requirements for the program such as the different stages, and examination criteria, needs to be revised in collaboration with students from the first cycle.

We agree with the EEC's suggestion, and the School intends to review the requirements across the first cohorts, to ensure the appropriateness and effectiveness of policies. Although the program committee will be carefully monitoring progress throughout, the first formal review of the program will be after completion of the first three (3) semesters of the program, where students will have completed with obligatory courses, and the qualifying examination. This will allow an initial assessment of workload, examination criteria, among others.

6.2 Proposal and dissertation

As above, given the fact that the program is new, a close attention to guidelines and practices around the dissertation are needed in the first cycle. The requirement of 3 accepted publications sems high.

As noted above, the School intends to closely and carefully monitor the guidelines and practices related to the proposal, as well as the dissertation with the first entering student cohorts. We agree with the EEC concern that three (3) publications (accepted) may be an excessive burden on our graduate students. Based on consideration of these concerns, the requirement will be revised to include two (2) publications (submitted), and with presentation of work at, at least, one (1) international conference. As recommended, we will carefully monitor course performance, research output, and development of our initial student intake very carefully.

6.3 Supervision and committees

The duties of the advisory committee will need formalising as part of guidance for students, although the EEC recognise this will be activity to be undertaken nearer to the start of the PhD programme. The EEC felt that formalising the implementation of a mentor besides the supervisor could be advisable. Developing local (School of Medicine) processes is needed for contextual delivery of students in need of extra support. The School might wish to consider the role of an overarching PGR tutor/advisor, using an academic experienced in working with overseas/international students.

We agree with the EEC that the duties of the Supervisory/Advisory Committee will need further formalization. As noted above, we have attempted to clearly define procedures for both the Supervisory/Advisory and Examining committees. The program intends to encourage regular meetings and support mechanisms to augment a productive and healthy supervisory relationship between students and faculty. We believe that with the introduction of the E-portfolio, as well as student feedback we will be able to further foster productive and healthy student-advisory committee relationships.

The program will examine the implementation of a mentoring system, as has been done in another Ph.D. program with success. We believe that the implementation of a mentor or even PGR tutor/advisor could be examined with the first cohort informally, before outlining definitive guidelines.

7. Eligibility (Joint programme)
(ALL ESG)

N/A

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B. Conclusions and final remarks

The Medical Sciences 3 Years PhD programme is a promising and new programme in a young academic setting. The strategic fit and commitment by both the School of Medicine and wider EUC is clearly articulated.

The School is extremely pleased that the EEC found that the Ph.D. Program in Medical Sciences is a promising new program in our young Medical School. Our School has attempted to ensure an effective learning environment, with staff that are well-qualified and patient about their work. We have worked hard to maintain our learning environment at the highest standards, with staff members who work with passion, dedication and ethos.

The EEC wish to congratulate the School and EUC for the comprehensive submission for this programme, and highlight particular thanks for colleagues' time, generosity and openness during the virtual site visit. A spirit of academic collegiality and active discussion was evident throughout the meetings. The EUC should be particularly congratulated on its MD students and recent MD graduates, all of whom were outstanding ambassadors during their session with the EEC.

We would like to thank the EEC for this comment. The School is extremely grateful to the entire staff and students for their enthusiasm and dedication. Without their continuous efforts, support and input, much of what the School has accomplished would not have been possible. We have attempted to imbue the need for excellence in our School, recognizing that this is achieved not by a momentarily action, but rather, by habit and more importantly, by accepting critical evaluation of our performance and acknowledging areas that need improvement.

We are also grateful for the EEC's observation regarding our students and graduates. We believe that student satisfaction with the education provided is the direct result of our student-centered collaborative efforts, that creates a safe and highly productive environment for both staff and students.

Above all, we are very grateful to the EEC for their candid discussions regarding our program, and the insightful comments and suggestions throughout the virtual site-visit and their report. The School's leadership, as well as the faculty, staff and students found the EEC's discussions a constructive learning process. We all believe that this was a positive experience and we feel that we were provided with important clues how to move effectively forward.

The Medical Sciences programme has a clear design, and ambition to be distinctive as well as a future cornerstone of the Medical School. There seems to be an awareness of the important in ensuring successful recruitment of early cohorts and to subsequently evaluate early experiences to shape the programme further.

As correctly noted by the EEC, the School believes that the Ph.D. in Medical Sciences will serve as a future cornerstone of the Medical School. Along with our efforts to recruit premier research faculty to spearhead research efforts, our goal of successful recruitment of early Ph.D. students, along with focused research training will facilitate our strategic overarching

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goals of building a strong research culture to ensure a vibrant, productive research community.

This should aim to develop a learning society (community of practice) among students, to foster deeper learning and scientific skills and attitudes alignment with the key ILOs of the course. The core Faculty for the MSc are engaged and well committed (with clinical, teaching and research experience). Drawing on support from colleagues within research education from other departments in the University is a strong strategic approach, alongside the School's international networks.

We are in complete agreement with the EEC on the need to create a community of practice and enhance life-long learning skills. As noted above, the School intends to regularly host a series of events throughout the program, including, journal clubs, research presentations by students, expert lectures, among others to both develop a community of scientists and critical thinkers and enhance peer support. More specifically, students will be requested to present either their research (research seminar) and/or related state of the art study/bibliography (journal club) on a regular basis. In addition, external experts will be invited to present their studies, but more importantly to give the opportunity for our students to interact with open, inquisitive dialogue.

More generally, the programme benefits from the dedication at EUC towards quality assurance, distance learning and student engagement, and its modern infrastructure.

We would like to thank the EEC for recognizing that the Medical School and EUC have many specific policies and procedures for quality assurance, that will be able serve the Ph.D. program. These include several committees (School Quality Assurance Committee, EUC Quality Assurance Committee, Advisory Boards, etc.) with inclusion of multiple stakeholders such as external experts and students, to ensure continuous external and internal monitoring of the educational program and standards. We are pleased that the EEC acknowledges that based on the rich experience of the School, the program was able to devise a clear plan for review during the onset of the program. As indicated by the EEC, all information regarding recruitment will be made publicly available once the program is launched.

We are grateful for the EEC's recognition of our modern infrastructure. The School makes a concerted effort to review and update all resources, so as to remain updated and effective. A constant strategy has been to maintain excellence in our infrastructure necessary to deliver both a cutting-edge curriculum and research.

Critical to the success of the programme (and beyond the scope of this EEC review) will be an active programme of learner and Faculty evaluation, with related course enhancements. We wish EUC and School of Medicine colleagues well with this ambitious and exciting development.

Central to the philosophy of the School is our focus on continuous improvement and development. This includes offering various means for both student and faculty to evaluate the program. As such, and as noted above, the School and the program intends to monitor the first student cohorts closely, with continuous open discussions as well as e-portfolios. This will allow us to examine the student workload, any difficulties with training, areas to

improve, appropriateness of student supervisory/advisory committees, assessment, among others. Monitoring and review of the program will be continuous.

In a summary we found all sub-areas compliant with multiple strengths and much to commend and celebrate. To help the programme flourish, our summary of recommendations includes:

- **Consolidation of modular ILOs and clear alignment with assessment**

  As noted above, and in accordance with the EEC's suggestion, we have made a concerted effort to consolidate and reframe the ILOs to better ensure their alignment with student activity and assessment (please see Appendix I: Course Syllabi)

- **Careful monitoring of student workload (particularly in respect of achievability of three publications alongside taught components, main research and thesis writing/defence).**

  We agree with the EEC that we will need to monitor the workload throughout the beginning of the program. We believe that the open discussion sessions and e-portfolios, will provide ample feedback, allowing us to make modifications, where and when necessary. In addition, the School intends to closely and carefully monitor the guidelines and practices related to the proposal, as well as the dissertation with the first entering student cohorts.

  We agree with the EEC concern that three (3) publications (accepted) may be an excessive burden on our graduate students. Based on consideration of these concerns, the requirement will be revised to include two (2) publications (submitted), and with presentation of work at, at least, one (1) international conference. As recommended, we will carefully monitor course performance, research output, and development of our initial student intake very carefully.

- **Clarity on the roles and function of the programme advisory committee (particularly to ensure positive supervisory relationships)**

  We agree with the EEC that the duties of the Supervisory/Advisory committee will need further formalization. As noted above, we have attempted to clearly define procedures for the Supervisory/Advisory and Examination committees. The program requires regular meetings and which will help provide support mechanisms to augment a productive and healthy supervisory relationship between students and faculty. We believe that with the introduction of the E-portfolio, as well as student feedback we will be able to further foster productive and healthy student-advisory committee relationships.

  Feedback and interactive activities are an important part of the professional development of our Graduate Students. We agree with the EEC that this will require special attention during the program outset.

  Within the first semester, the Supervisory Committee will meet with the student to review the scientific quality of the research project, whether the project may reasonably be expected to result in a dissertation of the required standard within the defined timeframe, the degree to which the project encourages innovation and creativity, the qualifications/compatibility of the

nominated supervisory and define clear timepoints to evaluate the progress of the research. More specifically, as presented during the site-visit, the Supervisory Committee, will host a minimum of 3 formal sessions to evaluate the progress of the research and support students over the course of their dissertation. The Supervisory Committee will consist of the Supervisor (if the supervisor is an external expert, this will include an EUC faculty member as co-supervisor) and two (2) faculty members relevant to the topic. An external expert is strongly encouraged to be on the Supervisory Committee.

Specifically, these formal meetings are planned to discuss the research proposal, discuss performance, review coursework performance, discuss and plan for teaching duties, present and discuss progress of research project, among others. During the 1st Committee Meeting (~6 mo), the aim is to present and discuss the research proposal, discuss the performance during the initial period, review coursework performance, and present plan for teaching duties. For the 2nd Committee Meeting (~18mo), the student must provide a written progress report to members. The meeting includes a presentation and discussion of research, data and future research plans to complete study; a defense of data and strategy by the student; feedback about performance, review of coursework completed and review of teaching assignments. For the 3rd Committee Meeting (~24-30mo), the student must provide a written progress report to members. The student presents the research project, background, data, data interpretation, and future research strategy; the student defends data and strategy, and receives feedback about performance and teaching assignments.

At the end of each semester, the School will host regular open sessions with the first students for informal dialogue and feedback. As had been achieved with the undergraduate Medical program, students will be embraced in the process of addressing the Ph.D. program by the collection of qualitative data from student interviews by the program coordinator. These will not be structured, but will explore the feelings and perceptions of the students regarding the Medical Science Ph.D. program.

As noted above, the program will examine the implementation of a mentoring system, as has been done in other Ph.D. program with success. We believe that implementation of a mentor or even PGR tutor/advisor could be examined with the first cohort informally, before outline definitive guidelines.

- **Development of an academic mentoring scheme**

The program will examine the implementation of a mentoring system, as has been done in another Ph.D. program with success. We believe that implementation of a mentor or even PGR tutor/advisor could be examined with the first cohort informally, before outline definitive guidelines.

The EEC has also made a number of suggestions in the main body of the report to assist the programme in its early stages, and as it matures. These centre around two key areas:

- **The program could benefit from strategies aiming for the creation of an on-site community of practice beyond the initial 30 ECTS taught components**

  We are in complete agreement with the EEC on the need to create a community of practice and enhance life-long learning skills. As noted above and during the site-visit, the School intends to regularly host a series of events throughout the program, including, journal clubs, research presentations by students, expert lectures, among others to both develop a community of scientists and critical thinkers and enhance peer support.

  More specifically, students will be requested to present either their research (research seminar) and/or related state of the art study/bibliography (journal club) on a regular basis. Bi-weekly, formal sessions required by all graduate students and open to all medical faculty, medical students and interested parties from other health sciences, will take place. Each graduate student will be scheduled to present their research and one journal club presentation each semester. These sessions will also be used for graduate students to present rehearse any presentations intended for scientific meetings.

  In addition, external experts will be invited to for guest lectures. This will serve not only for the guest scientist to present their studies, but more importantly to give the opportunity for our students to interact with open, inquisitive dialogue. Based upon the final approval of the program, among the scientists will includes experts, such as Professor Konstantinos Stratakis (former Director of National Institute of Child Health & Human Development known for his clinical studies), Professor Achilleas Gravanis (Professor of Pharmacology known for his innovative projects such as "brain on a chip"), Professor George Chrousos (among the most highly cited scientists, known for his basic science, as well as clinical studies), and Dr. Popi Kanari (President of the Karaiskakion Foundation with one of the largest data banks for hematological malignancies).

  Collectively, the interdisciplinary dialogue provided by external experts invited for lecture and discussions, as well as the regularly scheduled meetings of graduate students and faculty to present research seminars and journal clubs, we believe will encourage the development of communities of practice, by promoting analysis, reasoning, evaluation, communication, teamwork, and critical thinking – all essential for scientific viability.

- **The program could benefit from recruiting students from different the health professions.**

  We totally agree with the EEC's comment. We truly believe in the multidisciplinary nature of modern medical science and as such, recruitment of students will include graduates not only various health professions, but also from basic science fields. We believe that this will enrichen student experiences collectively, as well as augment the overall output and significance of the research performed

In closing, the School leadership, as well as the faculty, staff and students found the EEC's candid discussions a constructive learning process. We all believe that this review was a positive

experience and feel that we were provided with important input on how to move more effectively forward. All of our faculty, and staff were enthusiastic about participating in the review process for this new program, and a large number of students were equally eager to participate. The School thoroughly reviewed the findings, strengths and areas of improvement clearly indicated by the EEC following their site visit. We have attempted to respond to each item specifically and succinctly, indicating our actions. By embracing the EEC's comments and suggestions, we are convinced that our Ph.D. in Medical Sciences has improved significantly, and will be able to more effectively ensure the learning outcomes of its students and the development of a community of practice. The leadership of the Medical School has imbued the need for excellence in the School and its programs, recognizing that this achieved not by a momentary action, but rather, by habit. More importantly, the excellence that all members of the School have strived to obtain is dependent upon accepting critical evaluation of our performance and acknowledging areas that need improvement. In this regard, we are truly grateful to the EEC for their candid discussions regarding our program, and the insightful comments and suggestions they made throughout their report.

C. Higher Education Institution academic representatives

Name	Position	Signature
Theodoros Xanthos	Chair of the Department of Medicine	
Elizabeth Johnson	Program Coordinator, Dean School of Medicine	
Anastasis Stefanou	Program Coordinator	

Date: 05/05/2021

Appendix 1 – COURSE SYLLABI

Course Title	Methods in Basic Science and Clinical Research				
Course Code	MDSC700				
Course Type	Compulsory				
Level	Doctoral (3rd cycle)				
Year / Semester	1st year/1st semester				
Teacher's Name	Prof. Dimitrios Farmakis, Prof. Anastasis Stephanou, Dr. Theodoros Lytras				
ECTS	10	Lectures / week	3 hours/14 weeks	Laboratories/ week	N/A
Course Purpose and Objectives	The purpose of this course is to provide an overview of research designs with an emphasis on observational studies and evidence synthesis methods. Further, to peer into statistics for execution and appraisal of clinical research, to present methodological tools and resources for performing observational studies and evidence synthesis, and to provide the opportunity for hands-on training with statistical and evidence appraisal platforms. Finally, to delineate principles of scientific writing and submission for publication in peer-reviewed journals, and to provide information on how to communicate scholarly work in scientific events and through the media				
Learning Outcomes	Upon successful completion of the course students should be able to: • Explain the principles and key components of research design for epidemiological, basic and clinical studies • Critically evaluate research findings in the literature • Develop a research question and formulate a testable hypothesis • Understand instrument development and data collection methods • Design a research methodology and apply basic medical qualitative and quantitative research methods and tools • Elaborate on selection and use of basic medical research methods				
Prerequisites	None		Co-requisites	None	
Course Content	Students will be introduced to the various research methodologies applied in medical science, including basic research, observational studies, clinical studies and trials, epidemiologic studies and qualititative research. In addition, students will learn to assess the available knowledge using advanced search strategies across a variety of electronical medical databases, in order to synthesis the available evidence and assess the quality of the evidence. The concepts of the research problem, testable hypotheses and protocols, as well as pilot research will be addressed.				

	The various sampling methods and the concepts of reliability and validity will be introduced, and the various threats that may affect the internal and external validity of an experiment and how to deal with them will be analyzed. Students will be exposed to the various data collection tools, as well as data handling according to the relevant variables and scales. Students will be introduced to systematic reviews and meta-analysis, the hierarchy of scientific documentation and how to critically review the quality of published articles.
Teaching Methodology	Face-to face
Bibliography	1. Laake P., Benestad H. and Olsen B. (2015) Research in Medical and Biological Sciences: From Planning and Preparation to Grant Application and Publication. Elsevier. 2. Supino, P.G., Borer, J.S. (2012) Principles of Research Methodology: A Guide for Clinical Investigators. Springer.
Assessment	Final Exam — 40% Class Participation and Attendance — 10% Assignment (s) — 50% **Total** — **100%**
Language	English

Course Title	Statistics in Medical Research, Data Analysis and Interpretation
Course Code	MDSC710
Course Type	Compulsory
Level	Doctoral (3rd cycle)
Year / Semester	1st year/1st semester
Teacher's Name	Dr. Theodoros Lytras, Prof Theoklis Zaoutis, Dr. Dimitris Paraskevis

ECTS	10	Lectures / week	3 hours/14 weeks	Laboratories / week	N/A

Course Purpose and Objectives	The course provides advanced statistical methods and reasoning. Students will understand the concept of sampling variation and its critical role in the construction of confidence intervals and hypothesis testing. The statistical methods will be applied to various datasets, including basic science, clinical, epidemiological, etc., using statistical software (particularly SPSS) and results will be interpreted. Students will be exposed to the appropriate methods to analyze sample data to derive evidence-based conclusions.
	Students will be trained in the use of statistical methods in biomedical research by applying some statistical tests and statistical models. Students will be able to describe, interpret and use the findings of research. A primary objective of the course, is to enable students to appropriately select and apply statistical methods to analyze their own dataset and to interpret the findings of their PhD project, as well as ensure their ability to apply statistical methods appropriately in their future research endeavors.
Learning Outcomes	Upon successful completion of this course students should be able to: • Explain key components of statistical analysis, including observation studies, clinical trials and survey studies • Describe and apply basic principles of statistical inference • Select the appropriate statistical approach for a particular study • Perform statistical analysis using modern statistical methods • Interpret statistical analysis results in health-related areas • Assess the quality of research evidence •

Prerequisites	None	Co-requisites	None

Course Content	Introductory concepts and type of data,

	- Describing data with frequency tables, describing data with diagrams, Describing data with summary measures of location and variance - Distribution of sample mean - Estimating confidence interval for a population mean - Estimating confidence interval for the difference and the ratio of two population parameters - Statistical test for the difference between population means, the statistical test t for independent means - The one way and two-way ANOVA test, the ANCOVA test and the MANOVA test - Statistical test for the ratio of two population parameters and $x2$ statistical test for the independence of two categorical variables - Estimating the correlation between two numerical variables - Linear regression - Logistic regression - Survival analysis - Power and sample size calculation in study designs - Intraclass correlation coefficient (ICC), Cronbach's alpha and Exploratory Factor Analysis The theoretical concepts will be specialised in the context of the weekly computer laboratory, where students will process and analyse data by means of a statistical software, so that upon completion of the course they will be able to process data, prepare tables and charts and produce statistical results in their own scientific work.
Teaching Methodology	Face-to-face
Bibliography	Plichta, S. and Kelvin E. Munro's Statistical Methods for Health Care Research. 6th Edition. J. B. Lippincoltt Company, 2013 Field A. Discovering Statistics Using IBM SPSS Statistics. 5th Edition, Sage Publishing, 2018 Bowers D. Medical Statistics from Scratch: An Introduction for Health Professionals. 3rd Edition. Wiley-Interscience, 2014

Assessment		
	Final Exam	40%
	Class Participation and Attendance	10%
	Assignment (s)	50%

	Total	100%	
Language	English		

Course Title	Research Ethics and Scientific Writing				
Course Code	MDSC720				
Course Type	Compulsory				
Level	Doctoral (3rd cycle)				
Year / Semester	1st year/1st semester				
Teacher's Name	Prof Elizabeth Johnson, Prof Theodoros Xanthos, Prof Dimitrios Farmakis				
ECTS	10	Lectures / week	3 hours/14 weeks	Laboratories / week	NA
Course Purpose and Objectives	This course intends to facilitate the development of students' dissertation research ideas and to contribute to the student's professional development focusing on researching and academic writing skills necessary for completion of a PhD dissertation and submission of articles for publication. In this course, students will develop the skills and techniques underpinning exploration and analysis of scientific literature including scholarly writing skills, critical analysis skills, oral communication skills, bibliographic skills and ability to develop time-management skills. The course is designed to help doctoral students to practice these skills and to combine them in preparation of an extended, original research proposal.				
Learning Outcomes	Upon successful completion of this course students should be able to: • Recognize ethical perspectives in research; integrity, accountability and responsibility • Identify, analyze and discuss ethical problems in medical and life sciences research on animals and humans • Recognize and reflect critically on the main norms of research ethics • Understand the various methods to disseminate research and how to write various types of scientific texts • Understand the specific requirements of a PhD dissertation • Understand how to write an original scientific article • Search and manage the scientific literature • Understand the process of scientific review and publication in the international literature				
Prerequisites	None		Corequisites	None	
Course Content	Students will be introduced to and critically discuss the legal rules related to basic science and clinical research. The course will introduce the norms of research ethics both nationally, and internationally. The				

	course will cover the legal requirements related to the protection of participants in research and the processing of personal data, the use of animals for basic science studies, as well as good scientific practice related to clinical studies. Students will also be introduced to the ethical considerations of scientific writing, including plagiarism, authorship, ghost writing, etc.

A second concept covered in the course is related to the dissemination of research and its importance in medical academics. Students will be introduced to the various means that dissemination can take place, including writing, social media, lectures, blogs, etc. Students will develop academic writing skills and practice critical appraisal of published research studies. They will be guided through the basic methods and systems of publication in international journals related to their area of interest, aiming at an international recognition of their results.

Finally, students will be introduced to the formal and practical aspects of writing their PhD dissertation, particularly how to present and justify the research question, selected. Through a combination of lectures, and workshops, this course guides students through the process of generating initial doctoral dissertation ideas, identifying which ideas appear most promising, refining a topic, developing an independent approach to their material, and defining a program of research and writing. By the end of this course the PhD candidates will possess the knowledge regarding each and every step for the creation of a research proposal, writing and completion of the PhD dissertation. Students will be able to perform comprehensive bibliographic searches and literature reviews and organize their knowledge regarding their topic, identify any potential gaps in the literature that they could cover with their own research project, define their aims and hypotheses and select the adequate quantitative and/or qualitative methods for their examination. The PhD candidates will develop a research plan outlining a quantitative or qualitative research study that they plan to use for their dissertation.

Apart from the teaching hours in group, students will have regular meetings with their supervisor, so as to systematically progress in their specific topic and define the necessary steps towards the PhD dissertation completion. |
| Teaching Methodology | Face to face |
| Bibliography | Dunleavy, P. (2006). Authoring a PhD: *How to Plan, Draft, Write and Finish a Doctoral Thesis or Dissertatio*n. UK: Palgrave

Belcher, W.L. (2009). *Writing your journal article in twelve weeks: A guide to academic publishing success*. Thousand Oaks, California: Sage Publications, Inc |

	Davis, G. B. & Parker, C. A. (1997). *Writing the doctoral dissertation: A systematic approach*. Hauppauge, NY: Barron's Educational Series. ISBN: 0-8120-9800-5
	Galvan, J. S. (2009). *Writing literature reviews: A guide for students of the social and behavioral sciences (4th ed.)*. Glendale, CA: Pyrczak Publishing. ISBN: 1-884585-86-8
Assessment	Assignment (s) 80%
	Class Participation and attendance 20%
	Total **100%**
Language	English

Appendix II. Summer Externship Opportunities

No	University/ Specialty	Country	Max. No of Students
1	University of Rome "Tor Vergata" (English Speaking) Surgery, Cardiology, Medicine, Hygiene, Medical Biochemistry, Clinical Medicine, Cosmetics / Research	Italy	6
2	University of Southampton Medical Nutrition/Research	UK	2
3	Barts and the London School of Medicine Queen Mary, University of London. Neuroscience, Neurotrauma and Neurodegeneration / Research	UK	2
4	AHEPA Thessaloniki Neurology/Neuroimmunology/ Research	GR	3
5	Shriners Hospitals for Children SHC Springfield Massachusetts (SHC Springfield can provide in hospital housing and meals at no charge) Pediatrics, orthopedics /Research	USA	2
6	Aristotle University of Thessaloniki Thessaloniki Greece Obstetrics - Gynecology - Maternal Fetal Medicine	GR	3
7	AXEPA Hospital Aristotle University of Thessaloniki Internal Medicine	GR	3
8	Hippokrateion General Hospital Aristotle University of Thessaloniki Neonatology	GR	2

9	**Hippokration Hospital** **Aristotle University of Thessaloniki** Pediatrics – Infectious Diseases	GR	2
10	**Papageorgiou General Hospital** **Aristotle University of Thessaloniki** Orthopedics	GR	3
11	**Aristotle University of Thessaloniki** Forensic Medicine and Toxicology	GR	2
12	**Alpert Medical School and Brown** **University** **Rhode Island Hospital** Molecular Microbiology and Immunology	USA	2
13	**American University of Beirut,**	Lebanon	2
14	**Golestan University of Medical** **Sciences**	IRAN	2
15	**Oxford Medical** Transplant Surgery	UK	2
16	**Sidra Organization** Pediatrics/Neonatology,	Qatar	2
17	**Oxford Medical** Cardiology/Research	UK	2
18	**University Clinical Halle (Saale)** Institute for Medical Immunology	Germany	2
19	**Thrombosis and Hemostasis Center** Service d'Hematologie Biologique, Hopital Tenon, Group Universitaire de l'Est Parisien, **INSERM U938, Research Group** "Cancer-Hemostasis-Angiogenesis. **Faculty of Medicine Sorbonne** **University, Paris**	France	2

20	Neuroimmunology Unit and MS Center at Hadassah and the neuroimmunology laboratory	Israel	2
21	Thessaloniki AHEPA Cardiology	GR	2
22	Univ of Thessalia, School of Medicine Orthopedics	GR	2
23	Weizman Institute of Science, Hebrew University of Jerusalem Medical Biochemistry	Jerusalem Israel	2
24	German Oncology Center Cardiology	Limassol Cyprus	6
25	NIKON-Center of Excellence; Medical University of Graz, Austria	Austria	2
26	Johns Hopkins, USA Cardiology Cardiology	USA	2
27	Henry Dunant Hospital Cardiology	GR	2
28	Humanitas Research Hospital, Cardiology	Milan Italy	2
29	Technion - Israel Institute of Technology in Haifa	Haifa Israel	2
30	Larissa University Hospital Cardiology	Larissa Greece	2
31	Naval Hospital Athens Invasive Cardiology	Athens Greece	2 1.
32	The Donald and Barbara Zucker School of Medicine at Hofstra/ Northwell in NY	USA	2

33	Anesthesiology; Apollonio Private Hospital and the American Medical Centre in Nicosia	Nicosia Cyprus	2
34	Institute of Pain Medicine, Tel Aviv Medical Centre in Israel Anesthesiology;	Tel Aviv Israel	2
35	Neuroimmunology Unit at Hadassah and the neuroimmunology laboratory	Israel	2
36	Medical College of Wisconsin Department of Anesthesiology	USA	2