

KYΠPIAKH ΔHMOKPATIA REPUBLIC OF CYPRUS



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



A. Guidelines on content and structure of the report

- The Higher Education Institution (HEI) based on the External Evaluation Committee's (EEC's) evaluation report (Doc.300.1.1) 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, <u>without changing</u> <u>the format of the report</u>:
 - the findings, strengths, areas of improvement and recommendations of the EEC
 - the deficiencies noted under the quality indicators (criteria)
 - the conclusions and final remarks noted by the EEC
- The HEI's response must follow below the EEC's comments, which must be copied from the external evaluation report (Doc. 300.1.1).
- In case of annexes, those should be attached and sent on a separate document.

The Department of Life Sciences of the European University Cyprus wishes to express its sincere gratitude to the External Evaluation Committee (EEC) for the reevaluation of the undergraduate programme of study in Biological Sciences (B.Sc.).

The collegial spirit created by the members of the EEC during the evaluation processes created an atmosphere of knowledge sharing and synergy, which allowed the members of the Department to support the programme to the best of their abilities. It is thus, with great pleasure that the Department of Life Sciences noted the positive feedback of the EEC and we appreciate its insightful recommendations, which provided us the opportunity to further improve the quality and ensure the future implementation of the programme.

In the following pages, we respond in detail to all recommendations for improvement suggested by the EEC and we provide all relevant information to explain the actions taken to ensure that the newly accredited programme is of high quality.



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

Comments by EEC:

1. The ratio between compulsory and elective courses is highly skewed to the former, which limits the flexibility of the programme and makes it difficult for the students to obtain an individual profile. This also makes it difficult for students to free up a complete semester to do a foreign exchange (Erasmus etc.) or to do some other long term project (Bachelor outside the intramural curriculum). Such extramural activity could help the students to get some personal profile in addition to the good basic education provided by the very school-like programme. In case the number of compulsory courses cannot be reduced because of the required accreditation in several countries, it could help the students to take courses in advance. To increase the number of available elective courses, it could be considered to make courses offered in the Biomedical Sciences programme available to the students in the Biological Sciences programme, provided this does not pose a problem regarding language requirements.

2. Experimental bachelor projects are restricted to the top-ranking students only. To make experimental bachelor projects available to more students it could be considered to offer the same experimental projects to multiple students that work in groups but each make an individual thesis.

3. The small number of students currently enrolled, and the tendency towards a decrease in enrolment of local students makes the programme vulnerable to annual fluctuations. To ensure a future critical mass of students one may consider to strengthen the environmental sciences (organismal biology, ecology) component of the programme.

4. The compulsory English courses in the programme do not lead to an internationally recognized certificate. Certification of the English courses (Scientific English I and II) to UNIcert III (European Level C1) or similar, would enable students to enter international English language master programmes. This would benefit the students, who would not have to take additional TOEFL tests etc., and would thus encourage the students to fully engage in these courses.

Response by EUC:

 In accommodating the ECC's recommendation, we have now increased the number of Elective courses by seven in the concentration of General Biology and six in the concentration of General Microbiology. Of these, two are Environmental Science-related ("Climate Change and Environmental Pollution" (BIO360) and "Biodiversity and Environmental Conservation" (BIO365)"), three, from the Biomedical Sciences (B.Sc.) programme (BMS335, BMS405, BMS430) and two were previously compulsory courses and have now been converted into Elective ones ("Biotechnology (BIO319)" and "Biotechnology (BIO319)" only for the concentration General Microbiology). Hence, with these changes we hope to have fully complied with the EEC's suggestion.

We would also like to stress that the Programme, to ensure its equivalency, has a similar structure with other Biological Sciences Programmes in Greek Universities. Greece is the country most of the non-Cypriot students in the programme come from, but also the one where



the majority of the Cypriot students opt to go for Erasmus mobility. Therefore, a dramatic change in the elective/compulsory course ratio and the programme's structure, could cause chain problems in the Programme's accreditation by the Hellenic N.A.R.I.C./ Δ .O.A.T.A.Π. (the Hellenic National Recognition and Information Center).

The Course Breakdown for semesters 5, 7 and 8 in the two concentrations of the Programme (General Biology and General Microbiology) indicating the total number of 5 elective courses is presented in the table below. Yellow highlights indicate the addition of the two (2) new elective courses.

General Biology

5 th Semester (30 ECTS)		
Compulsory	Molecular Cell Biology II	BIO300
Compulsory	Botany and Plant Anatomy	BIO309
Compulsory	Zoology I	BIO318
Compulsory	Developmental Biology	BIO325
Elective Course		

7 th Semester (30 ECTS)		
Compulsory	Undergraduate Thesis I	HLS400
Compulsory	Medical Genetics	BIO405
Compulsory	Marine Biology	BIO415
Compulsory	Placement of Practical Exercise	BIO425
Elective Course		

8 th Semester (30 ECTS)		
Compulsory	Undergraduate Thesis II	HLS420
Compulsory	Plant Physiology	BIO430
Elective Course	·	
Elective Course		
Elective Course		

The list of Elective courses in the concentration of General Biology is presented in the table below. Yellow highlights indicate the newly added elective courses.

Elective	Microbial Biodiversity and Ecology	BIO480
Elective	Elective Nutrition and regulation of cellular functions	
Elective	Virology	BIO352
Elective	Parasitology	BIO356
Elective	Environmental Education	BIO358
Elective	Microbial Genetics	BIO354

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Elective	Bioethics in Biological Sciences	BIO435
Elective	Biotechnology	BIO319
Elective	Climate Change and Environmental Pollution	BIO360
Elective	Biodiversity and Environmental Conservation	BIO365
Elective	Cancer Biology	BMS335
Elective	Systems Biomedicine	BMS405
Elective	Pathobiology	BMS430

The revised Table 2 of the Document 200.1, containing the course distribution per semester, is available in APENDICES I-II (English and Greek version, respectively).

General Microbiology:

Compulsory	Molecular Cell Biology II	BIO300
Compulsory	Virology	BIO352
Compulsory	Microbial Genetics	BIO354
Compulsory	Мусоlоду	BIO375
Elective Course		

Compulsory	Environmental Microbiology and Physiology of Microorganisms	BIO450
Compulsory	Placement of Practical Exercise	BIO425
Elective Course		
Elective Course		

Compulsory	Undergraduate Thesis II	HLS420
Compulsory	Microbial Biodiversity and Ecology	BIO480
Compulsory	Medical Microbiology	BIO470
Elective Course		
Elective Course		



The list of Elective courses in the concentration of General Microbiology is presented in the table below. Yellow highlights indicate the newly added elective courses.

Elective courses – General Microbiology				
Elective	Pharmacology	PHA225		
Elective	Nutrition and regulation of cellular functions	LFS255		
Elective	Environmental Education	BIO358		
Elective	General Ecology	BIO340		
Elective	Developmental Biology	BIO325		
Elective	Marine Biology	BIO415		
Elective	Bioethics in Biological Sciences	BIO435		
Elective	Biotechnology	BIO319		
Elective	Climate Change and Environmental Pollution	BIO360		
Elective	Biodiversity and Environmental Conservation	BIO365		
Elective	Cancer Biology	BMS335		
Elective	Systems Biomedicine	BMS405		
Elective	Pathobiology	BMS430		

The revised Table 2 of the Document 200.1, containing the course distribution per semester, is available in APENDICES I-II. The course outlines of the new elective courses are available in APPENDICES III-VIII.

Regarding the EEC's recommendation to offer summer-term courses to students, we would like to clarify that this mechanism is already in place, since according to CY.Q.A.A.'s regulations (<u>https://www.dipae.ac.cy/index.php/el/enimerosi/anakoinoseis/102-2017-03-06-ects-2</u>) students are allowed to take courses up to 15 ECTS during the summer semester to compensate for missing credits and sign up for courses in advance. Unfortunately, this is not an option for Greek students or students who wish to have their degrees recognized in Greece, since the Hellenic N.A.R.I.C. does not recognize undergraduate courses taken during summer semesters.

Finally, we have considered the suggestion of the EEC of providing elective courses from the Biomedical Sciences (B.Sc.) Programme (which is offered in English language) to students in the Biological Sciences (B.Sc.) Programme (which is offered in Greek language), given that there are no language restrictions for the students and that the CY.Q.A.A. will allow this option. According to the CY.Q.A.A., a programme offered in Greek **is not possible to include courses offered in**



English (or any other language than the one the programme has been accredited). In light of this, the suggestion of the Committee to increase the English component of the programme following the introduction of courses in English, might not be possible to implement – at least not currently. Given these restrictions, the Programme would be willing to proceed in doing so, as suggested by the EEC, upon a formal approval of CY.Q.A.A. or amendments in the national regulations by CY.Q.A.A.

2. We are in agreement with the EEC suggesting to make more experimental undergraduate thesis available to more students. Indeed, the undergraduate students already have the choice of working in pairs, both for experimental research and bibliographic projects, but they deliver a common thesis. We therefore decided to adopt the EEC's suggestion to offer the same experimental project to more than one or two students, and encourage them to work in groups, but deliver individual theses.

In addition, the option for students to work in pairs in experimental Thesis projects has now been expanded to those with GPA above 2.0 (instead of 2.8 which was before), thus aligning with the EEC's recommendation; please see more information about this in our response in Section 2, item 1, page 10. The corresponding change has now been made in the guide of Thesis I/II (HLS400/HLS420) (APPENDIX IX).

- 3. In aligning with the EEC recommendation to strengthen the environmental sciences (organismal biology, ecology) component of the Programme, we have added two additional elective courses in the areas of environmental sciences (BIO360 and BIO365). In this way the Programme now includes a satisfactory number of courses in these fields, as outlined below:
 - Evolutionary Biology (BIO245) Compulsory
 - Botany and Plant Anatomy (BIO309) Compulsory
 - Zoology I (BIO318) Compulsory
 - Developmental Biology (BIO325) Compulsory
 - General Ecology (BIO340) Compulsory
 - Zoology II (BIO345) Compulsory
 - Marine Biology (BIO415) Compulsory
 - Plant Physiology (BIO430) Compulsory
 - Environmental Microbiology and Physiology of Microorganisms (BIO450) Compulsory
 - Climate change and Environmental Pollution (BIO360) elective
 - Biodiversity and Environmental Conservation (BIO365) elective
 - Environmental Education (BIO358) elective
 - Microbial Biodiversity and Ecology (BIO480) elective

Additionally, students can do their Placement of Practical Exercise (BIO425) in several environment-related institutions/organisations, with which the EUC has an already established collaboration, such as the following:

- Terrestrial Ecosystems management laboratory (Open University of Cyprus);
- Butterfly Society Cyprus;
- Department of Fisheries and Marine Research;
- Department of Forests of the Ministry of Agriculture, Rural Development and the Environment;
- Enalia Physis Environmental Research Centre.



Finally, the Department will carefully review the suggestion of the EEC for a new Master of Science programme in Environmental Sciences. The Department will discuss this in the process of the following round for the University's introduction of new programs of study in the beginning of Fall 2021 (this is a six (6) stage process which involves the final review and approval by University bodies outside the Department and School to be offering a new program) given that this academic year's procedure first stage was over in mid-December 2020. During that process and upon accreditation of the of the new M.Sc. program by CY.Q.A.A., as in all similar cases of introducing a new programme of study, a full-time Faculty in the broader area of Environmental Sciences will be announced. The opening of such position should adhere to all the necessary steps and internal regulations by the EUC.

4. We find the EEC's suggestion to provide a certification of the English courses (Scientific English I and II) to UNIcert III (European Level C1) or similar, valuable and worth pursuing. We have contacted the Department of Humanities, in which the Language Center of our University belongs to, in order to clarify whether students can, indeed, receive a Certification for the English language courses. We were informed that EUC English language courses follow a structure that corresponds to specific levels of English language instruction that are considered integral parts of a programme of study. Their main purpose is to strengthen students' research and academic language skills in their degree. They are not accredited by an international organization and EUC does not offer any standard certifications for these courses at present. Nevertheless, with the EEC's comment in mind, the University is currently exploring the possibility of language certification in the future through the Common European Framework of Reference for Languages (CEFR).



2. Teaching, learning and student assessment (ESG 1.3)

Comments by EEC:

1. Experimental bachelor projects are restricted to the top-ranking students only. To make experimental bachelor projects available to more students it could be considered to offer the same experimental projects to multiple students that work in groups but each make an individual thesis.

2. Students with lower than average GPA in a specific course(s) need to re-take the entire course again in order to improve their GPA and qualify e.g. for the bachelor thesis. It could be considered to make it easier for students to improve their GPA by allowing them to repeat exams they have already passed, but with a low grade (without having to repeat the complete course again).

3. Prior to the COVID19 pandemic, all exams were conducted on site using non-digital platforms. During the pandemic, the situation changed so that most, if not all, exams are now online. It could be considered to profit from the lessons learned during the pandemic and continue some of the digital procedures that worked particularly well, when the pandemic is over. Similarly, it could be considered to maintain some of the current digital teaching formats after the pandemic.

Response by EUC:

- 1. We thank the EEC for suggesting to offer the same experimental undergraduate thesis to multiple students that work in groups but each make an individual thesis. Indeed, this has been a long discussion in our Department and with the input of the EEC we have now revised our policy. In more specific, the undergraduate students already have the choice of working in pairs, both for experimental research and for bibliographic projects, but they deliver a common thesis. Given that we agree with the EEC's suggestion, we now offer the same experimental project to groups of two (2) or more students who will deliver individual theses. In addition, the option for students to work in pairs in experimental Thesis projects has now been expanded to those with GPA above 2.0 (instead of 2.8 as was before). The corresponding change has now been made in the guide of Thesis I/II (HLS400/HLS420).
- 2. As far as the EEC recommendation to allow students to repeat exams they have already passed, but with a low grade (without having to repeat the complete course again), in order to improve their GPA, this has been part of a University-wide discussion. In more specific, the EUC's policy which is in full accordance to the national regulations, is that students need to re-take an entire course they have already passed to improve their GPA. EUC has, nonetheless, established since September 2019, an internal regulation for any student who has failed a course with a grade between 50-60/100 to retake the final exam in September, without retaking the whole course (see attached EUC Resit Final Examination Policy, APPENDIX X).
- 3. Before the Covid-19 emergency measures for offering campus based courses online (March 2020) the European University Cyprus had a clearly formulated policy in place to gradually include the majority (80%) of its conventional (face-to-face) courses to its Digital Enhanced Learning (D.e.L.) project by 2022. This project aims at incorporating digital material and resources and digital pedagogical activities using the LMS platform Blackboard Learn. Thus, EUC was well prepared when the COVID-9 pandemic forced *all* our conventional programs to be offered online both in terms of available infrastructure and faculty expertise and materialized



this transformation in a very short period (less than a week). The University's D.e.L. policy is currently being re-designed in view of the legacy that the pandemic period will leave us with; namely to keep supporting with digital teaching formats all our conventional courses after the pandemic has ended.



3. Teaching Staff

(ESG 1.5)

Comment by EEC:

Referring to the above-mentioned comment regarding strengthening the environmental sciences (organismal biology, ecology) component of the programme, it could be considered to hire full-time faculty staff within these fields in the future. This is a long-term recommendation, which could go along with establishing a Master of Science programme in Environmental Sciences.

Response by EUC:

We value the EEC's suggestion, namely for introducing a new M.Sc. programme of study in Environmental Sciences. We have discussed this more thoroughly in our response above in Section 1, item 3, page 9. As explained there, this suggestion is under review during the EUC annual scheme of introduction of the new programmes of study (starting in September every academic year). As also explained, during that process and upon accreditation of a new M.Sc. program by CY.Q.A.A., as in all similar cases of introducing a new programme of study, a full-time Faculty in the broader area of Environmental Sciences will be announced. The opening of such position should adhere to all the necessary steps and internal regulations by the EUC. As a more general comment, the Department's policy is to expand our full-time Faculty staff in order to cover all its Programme's needs. This expansion appears in the Department's, the School's and the University strategic plan. For instance, please be informed that during the last two (2) academic years, the Department hired the following six (6) full-time Faculty members:

- Dr. Andreas Kalogirou, Assistant Professor (Organic Chemistry)
- Dr. Maria-Ioanna Christodoulou, Assistant Professor (Immunology)
- Dr. Malamati Kourti, Lecturer (Pharmacology)
- Dr. Antonis Alexopoulos, Lecturer (Sports Sociology)
- Dr. Ioannis Stavrou, Lecturer (Pharmaceutical Analysis)
- Dr. Athanasios Metaxas Assistant Professor (Pharmacology)

We have also announced the opening of a new full-time Faculty position in the field of Microbiology (any rank) and Anatomy-Physiology (any rank). The selection process for Anatomy-Physiology position is currently in progress, whereas the application deadline for Microbiology is on the 31st of March 2021. Both positions will be filled in starting 1.9.2021.



4. Students

(ESG 1.4, 1.6, 1.7)

Comments by EEC:

The compulsory English courses in the programme do not lead to an internationally recognized certificate. Certification of the English courses (Scientific English I and II) to UNIcert III (European Level C1) or similar, would enable students to enrol in international English language master programmes. This would benefit the students, who would not have to take additional TOEFL tests etc., and would thus encourage the students to fully engage in these courses.

Response by EUC:

We find EEC's suggestion valuable and worth pursuing. As discussed more thoroughly in our response above in Section 1, item 4, page 9, we have contacted the Department of Humanities, in which the Language Center of our University belongs to, in order to clarify whether students can, indeed, receive a Certification for the English language courses. We were informed that EUC English language courses follow a structure that corresponds to specific levels of English language instruction that are considered integral parts of a programme of study. Their main purpose is to strengthen students' research and academic language skills in their degree. They are not accredited by an international organization and EUC does not offer any standard certifications for these courses at present. Nevertheless, with the EEC's comment in mind, the University is currently exploring the possibility of language certification in the future through the Common European Framework of Reference for Languages (CEFR).



5. Resources

(ESG 1.6)

Comments by EEC:

The ratio between compulsory and elective courses is highly skewed to the former, which limits the flexibility of the programme and makes it difficult for the students to obtain an individual profile. This also makes it difficult for students to free up a complete semester to do a foreign exchange (Erasmus etc.) or to do some other long term project (Bachelor outside the intramural curriculum). Such extramural activity could help the students to get some personal profile in addition to the good basic education provided by the very school-like programme. In case the number of compulsory courses cannot be reduced because of the required accreditation in several countries, it could help the students to take courses in the summer term not only to compensate for missing credits but already to sign up for such courses in advance. To increase the number of available elective courses, it could be considered to make courses offered in the Biomedical Sciences programme available to the students in the Biological Sciences programme, provided this does not pose a problem regarding language requirements.

Response by EUC:

We thank the EEC for this suggestion. As discussed more thoroughly in our response above in Section 1, item 1, pp. 3-4, and in agreement with the ECC's recommendation, we have now converted two additional compulsory courses into electives, thus increasing the total number of elective courses to seven in the concentration of General Biology and six in the concentration of General Microbiology. These courses are "Biotechnology (BIO319)" and "Bioethics in Biological Sciences (BIO435)". Instead of these, students can now opt to take any elective course in semesters 5 and 8, respectively, from the list of the available elective courses. Additionally, we have included two new elective Environmental Science-related courses in the list of available elective courses. These courses, namely "Climate Change and Environmental Pollution" (BIO360) and "Biodiversity and Environmental Conservation" (BIO365), will also strengthen our Programme's focus on this field. In addition to these, we have also included three elective courses from the Biomedical Sciences (B.Sc.) programme, namely "Cancer Biology (BMS335)", "Systems Biomedicine (BMS405)" and "Pathobiology (BMS430)". Hence, with these changes we hope to have fully complied with the EEC's suggestion. For specific details, please refer to our detailed response in pages 3-7.



6. Additional for distance learning programmes

(ALL ESG)

N/A



7. Additional for doctoral programmes

(ALL ESG)

N/A



8. Additional for joint programmes (ALL ESG)

N/A



B. Conclusions and final remarks

Comments by EEC:

The programme has a very high standard and is in a good state with highly motivated staff as well as students. The EUC is thus to congratulate for such an excellent programme. The EEC understands that the EUC is still considering expanding further in the long run. Since the concentration in "General Biology" of this programme could be clearly improved by strengthening the organismal biology and ecology part, the EUC might want to enquire about establishing a Master of Science programme in Environmental Sciences to share faculty between such a Master programme and the Bachelor in Biological Sciences. Such a programme on Environmental Sciences could also have some connection to Health Sciences and Engineering, which the EUC is also focussing on.

Response by EUC:

We would like to sincerely thank the EEC for the positive feedback and its constructive recommendations. As described in the previous sections of the report, the Department of Life Sciences made a focused effort to address each of the EEC's recommendations. As such, we believe that these actions enhance the quality of the Biological Sciences (B.Sc.) programme of study. By making these changes, we believe that we are now able to offer a significantly improved programme of study which is in line with the European Qualifications Framework and which builds on our strengths and our readiness to implement the programme in an attractive student-friendly environment.

We summarize in brief, some of the major adaptations described in more depth above. According to the suggestions by the EEC, we have now:

- 1. Increased the number of Elective Courses in the programme to five (5) in total, by converting the following two (2) Compulsory courses to Electives:
 - Bioethics in Biological Sciences (BIO435)
 - Biotechnology (BIO319)
- 2. Increased the number of Elective Courses by seven in each concentration (General Biology and Microbiology), two of which are Environmental Science-related, and three of which are from the Biomedical Sciences (B.Sc.) programme:
 - Bioethics in Biological Sciences (BIO435)
 - Biotechnology (BIO319)
 - o Climate Change and Environmental Pollution (BIO360)
 - o Biodiversity and Environmental Conservation (BIO365)
 - o Cancer Biology (BMS335)
 - Systems Biomedicine (BMS405)
 - o Pathobiology (BMS430)
- 3. The establishment of a Master of Science programme in Environmental Sciences will be reviewed during the EUC annual scheme of introduction of the new programmes of study (starting each September). Upon accreditation of a new M.Sc. program by CY.Q.A.A., a full-time Faculty in the broader area of Environmental Sciences will be announced.



In closing, we would like to say that the Faculty members of the Biological Sciences (B.Sc.) programme and the Department of Life Sciences, in general, found the EEC's candid discussions, a constructive learning process. We all believe that this review process was a positive experience and feel that we were provided with important input on how to move effectively forward. In addition, we have thoroughly reviewed the findings, strengths and areas of improvement clearly indicated by the EEC following its review and 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 programme will be able to ensure the learning outcomes of its students more effectively. In this regard, we are grateful to the EEC for their candid discussions regarding our programme, and the insightful comments and suggestions throughout their report.



C. Higher Education Institution academic representatives

Name	Position	Signature
Panos Papageorgis	Dean, School of Sciences	
Anastasios Theodorou	Chair, Department of Life Sciences	
Apostolos Zaravinos	Programme coordinator	

Date: 17/3/2021



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APPENDIX I

«Biological Sciences (4 Years / 240 ECTS, B.Sc.)»

General Biology

General Microbiology

TABLE 2: COURSE DISTRIBUTION PER SEMESTER

A/A	Course Type	Course Name	Course Code	Periods per week	Period duration	Number of weeks/ Academic semester	Total periods/ Academic semester	Number of ECTS
		Compulsory Courses	s for both Concentra	ations (first two	years) - 120 E	CTS		
			1 Semester (3	0 ECTS)				
1.	Compulsory	Introduction to Biology	BIO115	4	50	14	56	6
2.	Compulsory	General and Inorganic Chemistry	LFS115	5	50	14	70	6
3.	Compulsory	Laboratory Calculations in Biological Sciences	BIO135	3	50	14	42	6
4.	Compulsory	Biostatistics	HEA180	2	50	14	28	3
5.	Compulsory	Mathematics for Life Sciences	MAT195	3	50	14	42	6
6.	Compulsory	Academic Skills for Health and Life Sciences	HLS100	2	50	14	28	3
	2 Semester (30 ECTS)							



7.	Compulsory	Cell Biology	BIO140	4	50	14	56	6
	Compulsory	Organic Chemistry	LFS135	5	50	14	70	6
9.	Compulsory	Physics for Biological Sciences	BIO145	3	50	14	42	6
10.	Compulsory	English for Health Sciences I [#]	EHL100	3	50	14	42	6
11.	Compulsory	Anatomy/Physiology I	HEA100	3	50	14	42	6
	·		3 Semester (30	ECTS)				
12.	Compulsory	Biochemistry I	LFS245	5	50	14	70	6
13.	Compulsory	General Microbiology	BIO200	5	50	14	70	6
14.	Compulsory	Introduction to Genetics	BIO230	5	50	14	70	6
15.	Compulsory	English for Health Sciences II #	EHL101	3	50	14	42	6
16.	Compulsory	Anatomy/Physiology II	HEA110	3	50	14	42	6
			4 Semester (30	DECTS)				
17.	Compulsory	Bioinformatics	HEA170	3	50	14	42	6
18.	Compulsory	Molecular Cell Biology I	BIO240	4	50	14	56	6
19.	Compulsory	Biochemistry II	LFS250	4	50	14	56	6
20.	Compulsory	Epidemiology	HEA105	3	50	14	42	6
21.	Compulsory	Evolutionary Biology	BIO245	3	50	14	42	6



		Courses for the Cor	centration in <u>General B</u>	iology (3 rd and	<u>l 4th year)</u> - (120) ECTS)						
5 Semester (30 ECTS)												
22.	Compulsory	Molecular Cell Biology II	BIO300	4	50	14	56	6				
23.	Compulsory	Botany and Plant Anatomy	BIO309	4	50	14	56	6				
24.	Compulsory	Zoology I	BIO318	4	50	14	56	6				
25.	Elective Cours	se and a second s		3	50	14	42	6				
26.	Compulsory	Developmental Biology	BIO325	3	50	14	42	6				
			6 Semester	(30 ECTS)								
27.	Compulsory	Immunology	BIO330	5	50	14	70	6				
28.	Compulsory	General Ecology	BIO340	3	50	14	42	6				
29.	Compulsory	Zoology II	BIO345	4	50	14	56	6				
30.	Compulsory	Teaching Biology	BIO350	3	50	14	42	6				
31.	Compulsory	Research Methodology	HEA190	3	50	14	42	6				
	7 Semester (30 ECTS)											
32.	Compulsory	Undergraduate Thesis I	HLS400					6				
33.	Compulsory	Medical Genetics	BIO405	4	50	14	56	6				



34.	Elective Cours	Se		3	50	14	42	6				
35.	Compulsory	Marine Biology	BIO415	3	50	14	42	6				
36.	Compulsory	Placement of Practical Exercise	BIO425	3	50	14	42	6				
	8 Semester (30 ECTS)											
37.	Compulsory	Undergraduate Thesis II	HLS420					6				
38.	Compulsory	Plant Physiology	BIO430	5	50	14	70	6				
39.	Elective Course)		3	50	14	42	6				
40.	Elective Course	9		3	50	14	42	6				
<mark>41.</mark>	Elective Course	9		3	50	14	42	6				
		Courses	s for the concentrat	ion in <u>General I</u>	Microbiology ((3 rd and 4 th year)	- (120 ECTS)					
			5 Semester (30) ECTS)								
56.	Compulsory	Molecular Cell Biology II	BIO300	4	50	14	56	6				
<mark>57.</mark>	Elective Cour	se	<mark></mark>	3	50	14	42	6				
58.	Compulsory	Virology	BIO352	3	50	14	42	6				
59.	Compulsory	Microbial Genetics	BIO354	3	50	14	42	6				
60.	Compulsory	Mycology	BIO375	4	50	14	56	6				



			6 Semester (3	0 ECTS)								
61.	Compulsory	Food Microbiology	BIO380	4	50	14	56	6				
62.	Compulsory	Immunology	BIO330	5	50	14	70	6				
63.	Compulsory	Teaching Biology	BIO350	3	50	14	42	6				
64.	Compulsory	Parasitology	BIO356	3	50	14	42	6				
65.	Compulsory	Research Methodology	HEA190	3	50	14	42	6				
7 Semester (30 ECTS)												
66.	Compulsory	Undegraduate Thesis I	HLS400			14		6				
67.	Compulsory	Environmental Microbiology and Physiology of Microorganisms	BIO450	5	50	14	70	6				
68.	Elective course			3	50	14	42	6				
69.	Elective course			3	50	14	42	6				
70.	Compulsory	Placement of Practical Exercise	BIO425	3	50	14	42	6				
			8 Semester (3	0 ECTS)								
71.	Compulsory	Undergraduate Thesis II	HLS420					6				
72.	Compulsory	Microbial Biodiversity and Ecology	BIO480	3	50	14	42	6				
<mark>73.</mark>	Elective Course			3	50	14	42	6				



74.	Elective Course			3	50	14	42	6
75.	Compulsory	Medical Microbiology	BIO470	5	50	14	70	6

Elective Courses

Students must choose 5 (five) elective courses from the list below. Courses marked with (*) can be chosen only from the students enrolled in the <u>General Biology</u> Concentration. Courses marked with (**) can be chosen only from the students enrolled in the <u>General Microbiology</u> Concentration. All other courses can be chosen from students enrolled in both concentrations

A/A	COURSE DESCRIPTION							
1.	PHA225	Pharmacology	6					
2.	BIO480*	Microbial Biodiversity and Ecology	6					
3.	LFS255	Nutrition and regulation of cellular functions	6					
4.	BIO352*	Virology	6					
5.	BIO356*	Parasitology	6					
6.	BIO358	Environmental Education	6					
7.	BIO354*	Microbial Genetics	6					
<mark>8.</mark>	BIO435	Bioethics in Biological Sciences	6					
9.	BIO319	Biotechnology	6					

Image: EuropeanImage: University Cyprus

<mark>10.</mark>	BIO360	Climate Change and Environmental Pollution	<mark>6</mark>
<mark>11.</mark>	BIO365	Biodiversity and Environmental Conservation	<mark>6</mark>
<mark>12.</mark>	BMS335	Cancer Biology	<mark>6</mark>
<mark>13.</mark>	BMS405	Systems Biomedicine	<mark>6</mark>
<mark>14.</mark>	BMS430	Pathobiology	<mark>6</mark>
15.	BIO340**	General Ecology	6
16.	BIO325**	Developmental Biology	6
17.	BIO415**	Marine Biology	6

* The two English courses are selected after a placement test of the student's English language proficiency. If the English language proficiency is equivalent to successfully completing the University's EHL101 level, then the remaining English language courses may be replaced by free elective courses



APPENDIX II

Βιολογικές Επιστήμες (4 Έτη/240 ECTS, Πτυχίο)

- Γενική Βιολογία
- Γενική Μικροβιολογία

ΠΙΝΑΚΑΣ 2: ΚΑΤΑΝΟΜΗ ΜΑΘΗΜΑΤΩΝ ΑΝΑ ΕΞΑΜΗΝΟ

A/A	Τύπος Μαθήματος	Όνομα Μαθήματος	Κωδικός Μαθήματος	Περίοδοι ανά εβδομάδα	Διάρκεια περιόδου	Αριθμός εβδομάδων/ ακαδημαϊκό εξάμηνο	Σύνολο περιόδων/ ακαδημαϊκό εξάμηνο	Αριθμός Πιστωτικ ών Μονάδω ν (ECTS)
		Υποχρεωτικά Μαθήματα κ	αι για τις δύο κα	ατευθύνσεις (΄	πρώτα δύο χι	ρόνια) - 120EC1	rs	
			Εξάμηνο 1	(30 ECTS)				
1.	Υποχρεωτικό	Εισαγωγή στη Βιολογία	BIO115	4	50	14	56	6
2.	Υποχρεωτικό	Γενική και Ανόργανη Χημεία	LFS115	5	50	14	70	6
3.	Υποχρεωτικό	Εργαστηριακοί υπολογισμοί στις Βιολογικές Επιστήμες	BIO135	3	50	14	42	6
4.	Υποχρεωτικό	Βιοστατιστική	HEA180	2	50	14	28	3
5.	Υποχρεωτικό	Μαθηματικά για τις Επιστήμες Ζωής	MAT195	3	50	14	42	6
6.	Υποχρεωτικό	Ακαδημαϊκές δεξιότητες για τις Επιστήμες Υγείας και Ζωής	HLS100	2	50	14	28	3



	Εξάμηνο 2 (30 ECTS)												
7.	Υποχρεωτικό	Κυτταρική Βιολογία	BIO140	4	50	14	56	6					
8.	Υποχρεωτικό	Οργανική Χημεία	LFS135	5	50	14	70	6					
9.	Υποχρεωτικό	Φυσική για τις Βιολογικές Επιστήμες	BIO145	3	50	14	42	6					
10.	Υποχρεωτικό	English for Health Sciences-I#	EHL100	3	50	14	42	6					
11.	Υποχρεωτικό	Ανατομία/Φυσιολογία Ι	HEA100	3	50	14	42	6					
	Εξάμηνο 3 (30 ECTS)												
12.	Υποχρεωτικό	Βιοχημεία Ι	LFS245	5	50	14	70	6					
13.	Υποχρεωτικό	Γενική Μικροβιολογία	BIO200	5	50	14	70	6					
14.	Υποχρεωτικό	Εισαγωγή στη Γενετική	BIO230	5	50	14	70	6					
15.	Υποχρεωτικό	English for Health Sciences-II #	EHL101	3	50	14	42	6					
16.	Υποχρεωτικό	Ανατομία / Φυσιολογία ΙΙ	HEA110	3	50	14	42	6					
		E	ξάμηνο 4 (30 ΕΟ	CTS)									
17.	Υποχρεωτικό	Βιοπληροφορική	HEA170	3	50	14	42	6					
18.	Υποχρεωτικό	Μοριακή Κυτταρική Βιολογία Ι	BIO240	4	50	14	56	6					
19.	Υποχρεωτικό	Βιοχημεία ΙΙ	LFS250	4	50	14	56	6					



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20.	Υποχρεωτικό	Επιδημιολογία	HEA105	3	50	14	42	6
21.	Υποχρεωτικό	Εξελικτική Βιολογία	BIO245	3	50	14	42	6
	1	Μαθήματα για τη κατεί	ύθυνση Γενική	ς Βιολογίας	(3º και 4º έ [.]	roς) – 120 EC	TS	1
			Εξάμηνο 5 (30	ECTS)				
21.	Υποχρεωτικό	Μοριακή Κυτταρική Βιολογία ΙΙ	BIO300	4	50	14	56	6
22.	Υποχρεωτικό	Βοτανική και Ανατομία Φυτών	BIO309	4	50	14	56	6
23.	Υποχρεωτικό	Ζωολογία Ι	BIO318	4	50	14	56	6
24.	<mark>Μάθημα Επιλο</mark>	γńς		3	50	14	42	6
25.	Υποχρεωτικό	Αναπτυξιακή Βιολογία	BIO325	3	50	14	42	6
	1		Εξάμηνο 6 (30 Ε	CTS)				
26.	Υποχρεωτικό	Ανοσολογία	BIO330	5	50	14	70	6
27.	Υποχρεωτικό	Γενική Οικολογία	BIO340	3	50	14	42	6
28.	Υποχρεωτικό	Ζωολογία ΙΙ	BIO345	4	50	14	56	6
29.	Υποχρεωτικό	Διδακτική της Βιολογίας	BIO350	3	50	14	42	6
30.	Υποχρεωτικό	Μεθοδολογία της Έρευνας	HEA190	3	50	14	42	6



	Εξάμηνο 7 (30 ECTS)											
32.	Υποχρεωτικό	Πτυχιακή Εργασία Ι	HLS400					6				
33	Υποχρεωτικό	Ιατρική Γενετική	BIO405	4	50	14	56	6				
24	Μάθημα Επιλον	/ής		3	50	14	42	6				
35.	Υποχρεωτικό	Θαλάσσια Βιολογία	BIO415	3	50	14	42	6				
36.	Υποχρεωτικό	Τοποθέτηση Πρακτικής Άσκησης	BIO425	3	50	14	42	6				
		E	Ξξάμηνο 8 (30 Ε(CTS)								
37.	Υποχρεωτικό	Πτυχιακή Εργασία ΙΙ	HLS420					6				
38	Υποχρεωτικό	Φυσιολογία Φυτών	BIO430	5	50	14	70	6				
39.	Μάθημα Επιλογ	/ής		3	50	14	42	6				
40.	Μάθημα Επιλογ	/ής		3	50	14	42	6				
41.	<mark>Μάθημα Επιλον</mark>	<mark>/ής</mark>		3	50	14	42	6				



	Μαθήματα κατεύθυνσης Γενικής Μικροβιολογίας (3º και 4º Έτος) - 120 ECTS										
	Εξάμηνο 5 (30 ECTS)										
56.	Υποχρεωτικό	Μοριακή Κυτταρική Βιολογία ΙΙ	BIO300	4	50	14	56	6			
<mark>57</mark>	<mark>Μάθημα Επιλο</mark> γ	/ής		3	50	14	42	6			
58	Υποχρεωτικό	Ιολογία	BIO352	3	50	14	42	6			
59	Υποχρεωτικό	Μικροβιακή Γενετική	BIO354	3	50	14	42	6			
60	Υποχρεωτικό	Μυκητολογία	BIO375	4	50	14	56	6			
		E	Εξάμηνο 6 (30 EC	CTS)							
61.	Υποχρεωτικό	Μικροβιολογία Τροφίμων	BIO380	4	50	14	56	6			
62	Υποχρεωτικό	Ανοσολογία	BIO330	5	50	14	70	6			
63	Υποχρεωτικό	Διδακτική της Βιολογίας	BIO350	3	50	14	42	6			
64	Υποχρεωτικό	Παρασιτολογία	BIO356	3	50	14	42	6			
65	Υποχρεωτικό	Μεθοδολογία της Έρευνας	HEA190	3	50	14	42	6			



		E	ξάμηνο 7 (30 EC	CTS)				
66.	Υποχρεωτικό	Πτυχιακή Εργασία Ι	HLS400	3	50	14	42	6
67	Υποχρεωτικό	Περιβαλλοντική Μικροβιολογία και Φυσιολογία Μικροοργανισμών	BIO450	5	50	14	70	6
68	Μάθημα Επιλογ	/ής		3	50	14	42	6
69	Μάθημα Επιλογ	/ής		3	50	14	42	6
70	Υποχρεωτικό	Τοποθέτηση Πρακτικής Άσκησης	BIO425	3	50	14	42	6
	1		Εξάμηνο 8 (30	ECTS)				
71.	Υποχρεωτικό	Πτυχιακή Εργασία ΙΙ	HLS420					6
72	Υποχρεωτικό	Μικροβιακή Βιοποικιλότητα και Οικολογία	BIO480	3	50	14	42	6
<mark>73</mark>	<mark>Μάθημα Επιλο</mark> γ	ής		3	50	14	42	6
74	Μάθημα Επιλογής			3	50	14	42	6
75	Υποχρεωτικό	Ιατρική Μικροβιολογία	BIO470	5	50	14	70	6



Μαθήματα Επιλογής:

Οι φοιτητές επιλέγουν 5 (πέντε) από τα ακόλουθα μαθήματα κατά τη διάρκεια των σπουδών τους. Τα μαθήματα με (*) μπορούν να επιλεγούν μόνο από φοιτητές στην κατεύθυνση <u>Γενικής Βιολογίας.</u> Τα μαθήματα με (**) μπορούν να επιλεγούν μόνο από φοιτητές στην κατεύθυνση <u>Γενικής Μικροβιολογίας.</u>

A/A	Περιγραφή Μαθήματος				
1.	PHA225	Φαρμακολογία	6		
2.	BIO480*	Μικροβιακή Βιοποικιλότητα και Οικολογία	6		
3.	LFS255	Διατροφή και Ρύθμιση Κυτταρικών Λειτουργιών	6		
4.	BIO352*	Ιολογία	6		
5.	BIO356*	Παρασιτολογία	6		
6.	BIO358	Περιβαλλοντική Εκπαίδευση	6		
7.	BIO354*	Μικροβιακή Γενετική	6		
<mark>8.</mark>	BIO435	<mark>Βιοηθική στις Βιολογικές Επιστήμες</mark>	6		
<mark>9.</mark>	BIO319	Βιοτεχνολογία	6		
<mark>10.</mark>	BIO360	<mark>Κλιματική Αλλαγή και Ρύπανση Περιβάλλοντος</mark>	6		
<mark>11.</mark>	BIO365	<mark>Βιοποικιλότητα και Διατήρηση Περιβάλλοντος</mark>	6		
<mark>12.</mark>	BMS335	Cancer Biology	6		
<mark>13.</mark>	BMS405	Systems Biomedicine	6		
<mark>14.</mark>	BMS430	Pathobiology	6		
15.	BIO340**	General Ecology	6		
16.	BIO325**	Developmental Biology	6		
17	BIO415**	Marine Biology	6		

[#] Τα δυο μαθήματα αγγλικών επιλέγονται μετά από δοκίμιο διαπίστωσης του επιπέδου γνώσης της αγγλικής γλώσσας του/της φοιτητή/τριας. Σε περίπτωση που το επίπεδο γνώσης της αγγλικής γλώσσας ισοδυναμείμε επιτυχή συμπλήρωση του επιπέδου ΕΗL101 του Πανεπιστημίου, τότε τα εναπομείναντα μαθήματα επιλογής αγγλικών δύνανται να αντικατασταθούν με μαθήματα ελεύθερης επιλογής.

Course Title	Biotechnology							
Course Code	BIO319							
Course Type	Elective							
Level	Bachelor (1st Cycle)							
Year / Semester	3 rd Year, 5 th Semester or 4 th Year / 7 th or 8 th Semester							
Teacher's Name	Dr. Antonia Sophocleous							
ECTS	6	Lectures / v	veek	3 Hours/14 weeks	Laboratories / week	N/A		
Course Purpose and Objectives	The aim of the course is to familiarize students with the basic principles and most important applications of Biotechnology in animals, plants and microorganisms with reference and reflection on the economic, social and moral implications that emerge.							
Learning Outcomes	 Upon successful completion of the course, students will be able to: Describe the basic principles and applications of both the "old" and mainly the modern science of biotechnology Explain the basic principles and molecular processes in recombinant DNA technology Summarize the major applications of Biotechnology in relation to animals, plants and micro-organisms Describe the main applications in food, environment and medicine Argue on Modern Ethics Issues in the Use of Biotechnology and its Impact on Society and Economy in General 							
Prerequisites	BIO140, BIO BIO240	0230,	Co-re	equisites	None			
Course Content	Introduction and historical review of the use of Biotechnology from antiquity to the present day. Contemporary Biotechnology. Genetically Recombinant DNA Technology Fermentation technology. Enzymatic Technology. Use of micro-organisms in Biotechnology Biotechnology in the manufacture and processing of food and food ingredients. Biotechnology and Animals							
	Biotechnology and Plants, Genetic Modification, Classical Genetic Improvement Biotech product range: Food, beverages, chemicals, fuels, medicines. Medical Biotechnology Security in Biotechnology. Social, economic, legal and moral problems emerging from the ever- increasing use of biotechnology in our lives. Both sides of the equation.							
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Methodology								
Bibliography	Βιοτεχνολογία με στοιχεία Βιοχημικ Liakopoulou - Kyriakidou. Ziti Publis Βιοτεχνολογικές Εφαρμογές. Savag Πανεπιστημιακές Εκδόσεις Κρήτης Βιοτεχνολογία ζώων- Εφαρμογές σ Triantafillides Κ. Κυριακίδη Publishi Βιοτεχνολογία Φυτών. Hadjopoulos Ενζυμική Βιοτεχνολογία. Klonis Ioa Πανεπιστημιακές Εκδόσεις Κρήτης	ής Μηχανικής. sh group. 2004 ge Ernest. . 2004 τον άνθρωπο. ing group. 2006 s P. Embryo Publishing group. 2001 nnis. . 1997.						
Assessment	Mid – Term Examination Final Examination Assignments Class Participation and attendance	30% 40% 20% 10% 100%						
Language	Greek							

Course Title	Climate Change and Environmental Pollution		
Course Code	BIO360		
Course Type	Elective		
Level	Bachelor (1st Cycle)		
Year / Semester	3rd Year, 5th Semester or 4rd Year / 7th or 8th Semester		
Teacher's Name	Dr. Andreas Savvides		
ECTS	6 Lectures / week 3 Hours/14 weeks N/A		
Course Purpose and Objectives	The course aims to provide knowledge about the environmental threats and pressures on ecosystems. Present the interactions of biological systems with the climate system (adaptation to climate change), propose the strategies that should be followed for assessing the health status of aquatic ecosystems (e.g. chemical and biological monitoring), the impacts of anthropogenic disturbances other than climate change (e.g. invasive species, pollution), the different stages/processes of urban and industrial waste treatment, the Renewable Energy Sources (RES) as well as their role as alternative and environmentally friendly energy saving solutions, and finally the basic principles of (eco)-toxicology.		
Learning Outcomes	 Upon successful completion of the course, students will be able to: Summarise the most important categories of pollutants/contaminants. Understand the physical basis of the natural greenhouse effect, including the meaning of the term 'radiative forcing'. Comment on the introduction of chemical substances/pollutants into the environment. 		

	 Assess the way is increasing emission are contributing to Evaluate the effect organism function Detect various phenoleutents in the emission of the emi	in which various ns of the natural g sulphate aerosols cts of pollutants (cellular, biochemi nenomena related	human activities are reenhouse gases and in the troposphere. on different levels of cal, molecular).		
	effect, ozone hole, etc.).				
	 Categorise basic phenomena, commonly related with the presence and the effects of environmental pollutants (e.g. bioaccumulation, etc.). 				
	Devise solutions and strategies for assessing environmental issues commonly related with the presence of pollutants.				
	 Develop the appro scientific collaboration pollution issues. 	Develop the appropriate skills for conducting inter- scientific collaborations for assessing environmental pollution issues.			
Prerequisites	None	Co-requisites	None		
Course Content	 Environmental pollution. Global climate and the greenhouse effect. Energy flows within the Earth-atmosphere system. 'Radiative forcing' as an agent of climate change. The human impact on the atmosphere: the coming of the industrial age. 				

	 Pollutants and xenobiotic compounds. Environmental transport and fate of pollutants. Pollutants' effects on biota (organism behavior, cellular, biochemical and molecular effects). Environmental status of Mediterranean area and Cyprus (socio-economic effects of pollution); monitoring strategies of pollution (chemical monitoring and biomonitoring). Provide knowledge of environmental status of ecosystems, climate change scenarios and pollution in Mediterranean basin, Cyprus and Greece. Renewable Energy Sources (RES) and Environment. Actions and policy areas (e.g. European Green Deal, UN75). Adaptation and vulnerability of the environment to climate change and to environmental pollution.
Teaching Methodology	Face- to- face
Bibliography	Κούγκολος, Αθανάσιος. Γ. Περιβαλλοντική μηχανική - Ρύπανση και προστασία περιβάλλοντος. 2018. Τζιόλα. ISBN- 13: 978-960-418-562-7. Π. Κατσαφάδος & Η. Μαυροματίδης 2015. Εισαγωγή στη Φυσική της Ατμόσφαιρας και την Κλιματική Αλλαγή. Αποθετάριο Κάλλιπος, ISBN: 978-960-603-053-6
	Casalegno S. 2011. Global Warming Impacts – Case Studies on the Economy, Human Health, and on Urban and Natural Environments. In TechOpen. ISBN-10: 9789533077857, ISBN-13: 978-9533077857.
	ADC Change, T Blair, R Pachauri. 2006. Avoiding dangerous climate change, Cambridge University Press, 2006.
	IPCC Summary for Policymakers Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects (eds Field, C. B. et al.) (Cambridge Univ. Press, 2014).
	Morris W. F. & Doak D. F. 2002. Quantitative Conservation Biology: Theory and Practice of Population Analysis.
Assessment	
	Mid-Term Examination30%Final Examination40%Assignments20%Class Participation and Attendance10%100%
Language	Greek

Course Title	Biodiversity and Environmental Conservation					
Course Code	BIO365					
Course Type	Elective					
Level	Bachelor (1s	t Cycle)				
Year / Semester	3rd Year, 5th	η Semester or 4rd Υ	/ear / 7th or 8th S	Semester		
Teacher's Name	Dr. Nicolas-0	Dr. Nicolas-George Eliades				
ECTS	6	Lectures / week	3 Hours/14 weeks	Laborator week	ies /	N/A
Course Purpose and Objectives	To provide students with knowledge according to biodiversity at all levels: genetic, species and ecosystems. Moreover, the course aims to provide rapid assessment approaches, estimation of species richness (by traditional, molecular, or proxy indicator methods), habitat management, conservation policy and regulations, threats, biodiversity loss, extinction, the documenting of long-term changes, and finally <i>in situ, inter situ</i> and <i>ex-situ</i> conservation strategies.					
Learning Outcomes	 Upon successful completion of the course, students will be able to: Express the importance of this diversity, the role and the use of natural value and biodiversity. Interpret the pressures and threats to biodiversity at local and national level. Examine the issues to biodiversity conservation at national, European and global level. Appraise the designation and assessment principles of protected areas. Compose and adapt the knowledge obtained in education, applied scientific research and sustainable management 					
Prerequisites	None	Co-re	quisites		None	

Course Content	 Introduction to biodiversity and conservation biology - subject, philosophical roots, ethical principles. The value of biodiversity and ecosystem services - direct and indirect values, long-term value, existing value, environmental ethics. Biodiversity - general concepts and terms, genetic diversity, diversity of species, habitats, ecosystems, landscapes, hotspots, worldwide biodiversity distribution. Tools for mapping, illustrating and quantifying biodiversity. Threats to Biodiversity - current situation and predictions, habitat destruction and fragmentation, environmental degradation and pollution, global climate change, biodiversity overexploitation, biological invasions and diseases. Extinction - general concepts, rates of extinction at various ecosystems and levels, island biogeography and extinction vortex. Human activities, threats and species loss. Setting of conservation targets, conserving populations and species - population dynamics, applied population biology, conservation categories, legal protection of species, establishing new populations, <i>in situ, inter situ and ex situ</i> conservation strategies. Protected areas - establishment and classification - design and managing, landscape ecology. Conservation outside protected areas - public and private lands, working with local people, ecosystem management and restoration. Sustainable management and development at the local level, conservation at the national level, funding and conservation 			
Teaching Methodology	Face- to- face			
Bibliography	Primack, R.B., M. Arianoutsou, P. Dimitrakopoulos. 2017. A Primer of Conservation Biology (in Greek). 496 pages. University Studio Press SA, Thessaloniki.			
	Gaston K. J. & Spicere J. I. 2008. Biodiversity – An Introduction. University Studio Press (in Greek Chintiroglou Ch. & Vafeidis D.).			
	Hawksworth D., L. 2018. Biodiversity and Conservation. 27:3561-3572. Springer.			
	Morris W. F. & Doak D. F. 2002. Qua Theory and Practice of Population Analys	ntitative Conservation Biology: is.		
	Ταμπάκης, Σ., Τσαντόπουλος, Γ. και Διαχείρισης Προστατευόμενων Περιοχών και Διαχείρισης Περιβάλλοντος και Φ Πανεπιστήμιο Θράκης.	Ανδρεά, Β. (2014) Πολιτικές γ, Έκδοση: Τμήμα Δασολογίας Ρυσικών Πόρων, Δημοκρίτειο		
Assessment	Mid – Term Examination Final Examination Assignments Class Participation and attendance	30% 40% 20% 10% 100%		

APPENDIX V. Course outline of Biodiversity and Environmental Conservation (BIO365)

Language	Greek

Course Title	Cancer Biology				
Course Code	BMS335				
Course Type	Compulsory	Compulsory			
Level	Bachelor (1st Cycle)				
Year / Semester	3rd Year / 6th Semester				
Teacher's Name	Vasiliki Gkretsi				
ECTS	6 Lectures / week 3 Laboratories / N// Hours/14 weeks				
Course Purpose and Objectives	The main objective of the Cancer Biology course is to provide a comprehensive overview of the biology and pathology of cancer, as well as methods of diagnosis and treatment approaches.				
Learning Outcomes	 Upon completion of the course, students will be able to: Differentiate normal and cancer cells Describe the hallmarks of cancer Describe the main characteristics of common cancer types Explain the types of gene mutations leading to carcinogenesis Define oncogenes and tumor suppressor genes Clarify how cancer cells escape cell death List and describe the steps that lead to metastasis Outline major therapeutic approached against cancer 				
Prerequisites	BMS100 Co-requisites None				
Course Content	 Cancer definition: benign vs malignant tumor Hallmarks of cancer Main characteristics of the most common types of cancer (breast, prostate, lung, liver, brain, colon) Mutagens and mutations. Tumor viruses. DNA repair defects and cancer Oncogenes and tumor suppressor genes, growth factors and their receptors in carcinogenesis Cell cycle control and the Rb tumor suppressor Apoptosis and the p53 tumor suppressor Cellular senescence and telomeres. Cellular immportalization and tumorigenesis. Telomerase as a therapeutic target Cancer stem cells 				

	 Angiogenesis Metastasis Familial cancer syndromes, hereditary cancer (i.e. breast cancer, colon cancer) Diagnosis of cancer-new genomic and proteomic technologies Tumor biomarkers Therapeutic approaches: chemotherapy, immunotherapy, targeted therapy
Teaching Methodology	Face- to- face
Bibliography	Molecular Biology of Cancer: Mechanisms, Targets and Therapeutics 2 nd Edition, by Lauren Pecorino. Oxford Press Robbins and Cotran, Pathologic Basis of Disease, 7 th Ed. Kumar, Abbas, Fausto, Elsevier, Saunders, 2005.
Assessment	Mid – Term Examination30%Final Examination40%Assignments20%Class participation10%100%100%
Language	English

Course Title	Systems Biomedicine					
Course Code	BMS405					
Course Type	Compulsory					
Level	Bachelor (1s	st Cycle)				
Year / Semester	4 th Year / 7 th	Semester				
Teacher's Name	ТВА					
ECTS	6 Lectures / week 3 Laboratories / N/ week weeks		N/A			
Course Purpose and Objectives	As knowledge of genome and gene expression deepens and lists of molecules (proteins, lipids, ions) involved in cellular processes are being developed, the need to understand how these molecules interact with each other to form modules that act as discrete functional systems arises. The main objective of the course is the introduction of students to the fundamentals of systems biomedicine, primarily as a discipline based on the analysis of dynamical interactions among individual members of a biological system aiming to the understanding of the system as a whole, and not merely its individual components.					
Learning Outcomes	 Upon the successful completion of the course, the students will be able to: comprehend the basic terms used in systems biomedicine describe modern laboratory approaches based on '-omics' methods and their importance in identifying key factors in diseases development integrate the '-omics' results into a meaningful whole and define the global model of biological processes responsible for disease development learn about the usage of global '-omics' methods in early diagnostics, prognostics and drug development 					
Prerequisites	BMS100, BM	MS320	Co-re	equisites	None	
Course Content	Theory: • Mode on gene	ern experime simultane s/proteins/m	ental a ous ietabo	approaches analysis lites and th	in disease resea of thousa eir interactions	rch based nds of in a living

	 system Monitoring of biological system functions in four dimensions (space and time) The importance of visualization (i.e. 'imaging') in systems biomedicine Fundamentals of global, comprehensive '-omics' methods (DNA-chips, RT-PCR, proteomics methods) in studying molecular pathological processes The role of '-omics' methods in early diagnostics, prognostics, disease development, discovery of new molecular targets for treatment as well as in research on drug mechanisms of action and drug safety Fundamentals of bioinformatics in systems biomedicine
Teaching Methodology	Face- to- face
Bibliography	Systems Biomedicine, Concepts and Perspectives Edison Liu Douglas Lauffenburger 1 st Edition, Academic Press ISBN: 9780123725509. Frontiers Research Topics. Comprehensive Systems Biomedicine. December 2014. Topic Editors, Enrico Capobianco and Pietro Lio. ISSN 1664-8714, ISBN 978-2-88919-374-5 DOI 10.3389/978-2- 88919-374-5.
Assessment	Mid – Term Examination30%Final Examination40%Assignments/Lab20%Class Participation10%100%100%
Language	English

	 Acute and chronic inflammation and repair Chemical mediators and regulators of inflammation Cell and tissue regeneration Role of extracellular matrix in tissue repair-scar formation Infectious diseases: general principles of microbial pathogenesis, transmission and dissemination of microbes Environmental and nutritional diseases: toxicity of chemical and physical agents, effects of tobacco and alcohol, injury by radiation, malnutrition, anorexia nervosa, vitamin deficiencies, obesity Examples of specific disease pathogenesis (Atherosclerosis, aneurysms, muscular dystrophy, diabetes, liver cirrhosis, Alzheimer's disease) 			
Teaching Methodology	Face- to- face			
Bibliography	Robbins and Cotran, Pathologic Basis of Disease, 7 th Ed. Kumar, Abbas, Fausto, Elsevier, Saunders, 2005.			
Assessment	Mid – Term Examination30%Final Examination40%Assignments20%Class Participation10%100%100%			
Language	English			

APPENDIX IX



SCHOOL OF SCIENCES DEPARTMENT OF LIFE SCIENCES BSc BIOLOGICAL SCIENCES

UNDERGRADUATE THESIS WRITING GUIDE

Nicosia, March 2021

In lieu of a Preface

The Undergraduate Thesis contributes significantly to the development of the search and learning skills in the aspiring graduate's subject area. The drafting and completion of the Undergraduate Thesis gives a sense of accomplishment in developing and creating. Over time, other people, including students, teachers, researchers, etc. will go through and read the works previously prepared, in order to complete their own search and broaden their knowledge.

In the process of submitting an Undergraduate Thesis in a University, elegant and accurate writing is as important as the comprehensiveness and originality of the research. This "Undergraduate Thesis Writing Guide" has been prepared by the academics of the Department of Life Sciences to assist students in achieving an outstanding result.

This Undergraduate Guide is not an exhaustive manual, but can provide substantial assistance in preparing an acceptable Thesis. The faithful application of the rules of the Guide is essential and will offer quality support to the entire effort. Moreover, attention to the various details and suggestions will help save valuable time. Students are therefore urged to read this manual thoroughly before embarking on the process of preparing the Undergraduate Thesis.

We also recommend and wish to draw your attention to the fact that you should not use other templates which may be incorrect, or follow instructions that are in conflict with the provisions of this Guide. An older Undergraduate Thesis or a Thesis from other Institutions may not have been drafted according to the writing rules included in this manual.

We wish you all the best!

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INTRODUCTION

The Undergraduate Thesis is considered to be the capstone of the student's educational process, being a key prerequisite for completing the studies and obtaining the Bachelor Degree.

The Undergraduate Thesis has both a formal and substantial status and is distinguished for its contribution to scientific knowledge, as it enables the student to explore the subject of study in depth and apply a systematic and scientific approach towards achieving the goal, whilst reflecting the quality of the application of his/her Program of Study.

The Undergraduate Thesis is a creative, independent and scientific search. It is the outcome of the student's capability to analyse and synthesise and his/her ability to use the entire spectrum of knowledge and skills acquired throughout the Program of Study.

A high quality Undergraduate Thesis is a reflection of continuous study and assimilation, as well as the application of knowledge, on condition that it meets the requirements in order to verify the student's professional maturity in addressing sophisticated applications of greater complexity and developing the skill of assessing and making good use of bibliography sources. It provides the proof that the student has the ability to apply his/her knowledge and skills, whilst learning how to function and work in a methodical way, using combinatorial thinking and documentation.

This "Undergraduate Thesis Writing Guide" was prepared in order to thoroughly describe the process of writing the Thesis and the guidelines for its completion.

It describes in particular the process of choosing the subject, the specifications in terms of writing, the structure, content, special methodological instructions for writing the key parts of the Undergraduate Thesis, its scientific documentation, the time frames relating to the completion, submission, consideration and assessment, the assessment criteria and the student's obligations throughout the preparation of the Undergraduate Thesis.

Information which is not clearly covered by this Guide in relation to the writing of the Undergraduate Thesis, as well as any problems, which may arise during the process, will be addressed by the supervisor in collaboration with the person in charge of the Course and the competent committee of the Department of Life Sciences. It is also recommended to use manuals on the Methodology of Research and Statistics, where this is deemed useful by the supervisor in collaboration with the student.

The ongoing collaboration between the student and the supervisor becomes necessary and essential and the student must fulfill his/her obligations without fail. The preparation of the Undergraduate Thesis in an entirely interactive process between the student and the supervisor throughout its duration, in the sense that the Supervisor provides ongoing and progressive feedback on the development of the Thesis.

Students must study the Guide carefully from the time they declare the Undergradute Thesis through to its oral defense, in order to avoid any mistakes, omissions and delays. The academic personnel guides and facilitates the ongoing collaboration with the students, with a view to completing the Thesis within the prescribed time frame.

OBJECTIVE AND LEARNING OUTCOMES

OBJECTIVE

The objective of the Undergraduate Thesis is to enable students to study in depth a topic within their chosen discipline, consisting of a dynamic combination of scientific significance and practical interest (connection with the student's main studies or his/her professional pursuits) through the mental process of analysis and synthesis and the use of critical thinking, as it derives from current scientifically and empirically documented knowledge.

LEARNING OUTCOMES

Learning outcomes are presented in detail in the syllabi of the Undergraduate thesis courses 1 (HLS400) and 2 (HLS420).

THESES COMMITTEES

COMMITTEE OF UNDERGRADUATE THESIS OF THE DEPARTMENT (INFORMAL)

The "informal" Committee of Undergraduate Thesis of the Departments comprises the instructor in charge of the course and one representative (member of the Faculty) from each Program of Study. The purpose of the Committee is to address issues regarding the review of the "Thesis Writing Guide", examine important issues arising from the execution of the Thesis by students, such as violation of academic ethics and morals (e.g. plagiarism) or other issues not foreseen or covered by this version of the Thesis Writing Guide, and inform students on current developments.

COMMITTEES OF UNDERGRADUATE THESES (INFORMAL)

For each one of the Programs of the Department of Life Sciences there is a twomember Undergraduate Theses Committee comprising from one to two Faculty members or members of the Special Teaching Personnel of each Program of Study and/or the instructor in charge of the course. The purpose of these Committees is to coordinate and supervise the process of assigning undergraduate Theses and plan and organize the procedure for their presentation and assessment through to their final submission with the Secretariat of the Department. This Committee is also responsible for addressing and tackling issues of minor importance which may arise.

RIGHT TO CONDUCT AN UNDERGRADUATE THESIS

This is described in detail in the syllabus and the course outline.

CONDUCT OF UNDERGRADUATE THESIS THROUGH COLLABORATION

If they so wish, two students can undertake the same Undergraduate Thesis in collaboration. However, <u>clear and distinct roles</u> must be delegated to them by the proposer to enable the distinct assessment of the work conducted by each one of

them. The aim is for each student to undertake <u>a distinct role in each section of the</u> <u>Undergraduate Thesis</u> and not write individual chapters entirely on their own, in order to enhance in this way collaboration between students in synthesising, linking and presenting the various parts of the Thesis.

DETERMINATION OF THE THESIS TOPIC – UNDERGRADUATE THESIS SUPERVISION - STUDENT GUIDANCE

The supervision of the Undergraduate Thesis is undertaken by the Departments' teaching personnel amongst holders of PhD (members of the TRP or Scientific Associates) or PhD candidates (Special Teaching Personnel, Clinical Trainers, Laboratory Assistants) or holders of Master degrees upon the relevant approval of the Department's Committee of Undergraduate Theses. The responsibility for the allocation of the Theses per Supervisor lies with the Committees of Undergraduate and Graduate Theses of the Department of Life Sciences. Each member of the TRP undertakes the supervision of a maximum of five (5) Theses of the Program per academic year. The maximum number of Undergraduate Theses allocated per Supervisor is determined by the needs of the Program and of the Department in general and may vary.

APPOINTMENT OF SUPERVISING PROFESSOR

The Supervising Professor (proposer) is appointed by the Committee of Undergraduate Theses of the Program within 10 working days from the expiry of the deadline for the submission of applications. The criteria for the selection of the Supervising Professor are his subject area and research interests. Any preferences of the student for a specific supervisor are taken into consideration only in research and original topics and provided there is availability in the specific period of time. Following the announcement of the proposers by the Committee of Undergraduate Theses of the Program, students must contact the Supervising Professor in order to specify and analyse the topic of the Undergraduate Thesis they have undertaken and proceed to the preparation and presentation of their research proposal. (Presentation only in the Department of Life Sciences).

CHANGE OF SUPERVISING PROFESSOR

Once a Supervisor has been designated, he/she may not change without the prior submission of a justified request to the Committee of Undergraduate Theses of the respective Program. In this case, if the Committee of Undergraduate Theses of the Program finds that the student is not at fault for the delay, it may extend the deadline for completing the Thesis by up to 2 months.

SUPERVISION – EXECUTION OF THE UNDERGRADUATE THESIS STUDENT SUPERVISION – GUIDANCE

During the execution of the Undergraduate Thesis, the student has weekly 30-60 minute meetings with his/her Supervisor, as determined between them (either in person or by teleconference), in order to receive feedback on the progress of the Thesis, plan together the next stages of execution and verify his/her progress. They

may also communicate through other electronic means or in any other way as determined by the Supervisor. At the initial meeting, the time frames for the progress of the Undergraduate Thesis are set and discussed and the skeleton to be followed by the student for the completion of the Undergraduate Thesis is defined.

Collaboration between the student and the Supervisor is essential and plays a key role in his/her final grade. In case, at any stage of the execution of the Thesis, more than three weeks elapse without any contact between the student and the proposer, the Supervising Professor reports the fact to the Committee of Undergraduate Theses of the respective Program and the student is called to justify this lack of contact in writing. If such justification is deemed inadequate, the Supervisor has the right to terminate the collaboration, in which case it is considered that the student has failed the course and receives an "F" (Fail) grade. Students have the obligation and must submit to their Supervisor parts of their Thesis at regular intervals in accordance with the set time frame. The delivery of the completed Thesis to the Supervisor, before or after the deadline for submission, without previous submission and correction by the Supervisor in parts, will not be accepted and the Undergraduate Thesis will be rejected, resulting in the student's failure. Moreover, Supervisors are not obliged to hold meetings and make corrections during holidays (Christmas, Easter, August).

ANNOUNCEMENT – ALLOCATION OF THESIS TOPICS

The topics of the Undergraduate Theses are sent by the coordinator of each Program to the professor in charge of the course for approval and are posted by the latter on the Moodle platform, together with the respective application forms. Once the topics are posted, the professor notifies the students using their University email address, they choose the topic that interests them and submit it online within the prescribed time frames announced at the same time as the topics.

APPLICATIONS FOR UNDERTAKING A THESIS TOPIC

During the summer of the semester preceding the semester in which the Undergraduate Thesis course is offered, applications are accepted on the Moodle platform (course HEA410 - DHS - at Senior Project Topic Application of each Program - see Annex on page 57) by students who satisfy the criteria to conduct an Undergraduate Thesis, in view of undertaking a relevant topic.

CHOICE OF TOPICS

The Students state on the standardized form, on a priority basis (see Annex on page 59) up to 5 (five) Thesis titles from amongst the topics to be announced by the Program of Studies of the Department of Life Sciences which they are attending. Students also have the right to submit up to one topic which interests them and is not included in the aforesaid list. It is noted that a proposed topic not included in the list will be approved only in case of expression of interest to supervise the topic in question by a member of the Departments' academic personnel. <u>NO</u> application for a topic proposed by a student will be accepted <u>unless the proposer sends his/her agreement in writing (mail) to the professor in charge of the course.</u>

ALLOCATION OF A THESIS TOPIC

The determination and assignment of a topic to the student falls within the competence of the Committees of Undergraduate Theses of the Programs of the Department of Life Sciences. More specifically, after the expiry of the deadline for the submission of topics by the students, the respective Committee of Undergraduate Theses of each Program of Studies of the Department of Life Sciences meets and examines the applications, allocating students to Supervising Professors. As a rule, for applications submitted within the deadline, topics and Supervisors are assigned on a priority basis in accordance with the following criteria:

The overall grade of each student (GPA) The availability of Supervisors.

For example, in case 2 (two) or more students (who intend to work either individually or as a team) happen to have chosen the same topic, priority is given to the student who has submitted his/her application within the deadline. In case two or more students have chosen the same topic and have both submitted their application within the deadline, the topic is allocated to the student with the highest overall grade (GPA) up until the third year of studies (in the case of a group Thesis the GPA of all collaborating students is taken into consideration). Finally, topics proposed by a Supervisor are allocated to students up until the maximum number of Theses that he/she can supervise. When the said number is reached, interested students are obliged to choose any other topic from amongst those remaining available on the list. It is the Departments' intention to satisfy the interests of all students, however for various reasons (availability of infrastructure, personnel, topic covered by other students) this may not be possible. As a result, a new topic and type of Undergraduate Thesis may be assigned to students.

MODIFICATION – CHANGE OF THESIS TOPIC

Following the allocation of the Thesis topic, no modification thereof is permitted without the prior submission of a well-substantiated application to the Committee of Undergraduate Theses of the respective Program, on condition that serious reasons for doing so apply. Applications by students for the modification of topics are accepted within a period of up to **30 days** from the allocation of the Thesis topic and they must necessarily be signed by both the student and his/her Supervisor.

FINALISATION OF THESIS TOPIC AND PROTOCOL ASSESSMENT

Within two months from the announcement of the Supervising Professors and the finalization of the topic, students are obliged to submit before the Committee of Undergraduate Theses of the Program to which they belong the proposal of the Thesis as well as its final title for confirmation. If they fail to do so, the assignment is cancelled and the student is marked with an "**F**" (fail) and submits a new application for Undergraduate Thesis in the following semester in which the course is available.

The Committee of Undergraduate Theses of each Program assesses the titles and the proposals of the Theses and if the proposed topic satisfies the requirements (relevant to the corresponding Program, in line with the scientific requirements of the Program and not executed in the past – at least 5 years must have elapsed from the approval of a similar topic) then the topic of the Undergraduate Thesis will be approved.

In case the Committee finds that the topic does not meet the requirements of the Program, it informs the student and the proposer accordingly and grants them an additional period of 10 working days to submit a new or modified title and a new proposal. If at the end of the foreseen time frame, the student has not submitted the title and the proposal, the topic is not allocated and the student fails the course. In case of disagreement in the Committee, the student's proposer, being the expert on the said topic, has the final say.

The protocol is assessed and marked by the Committee of Undergraduate Theses of each Program.

The protocol is evaluated by the supervisor in the Department of Life Sciences and by the Undergraduate Committee of each program in the Department of Life Sciences.

STRUCTURE OF THESIS PROPOSAL – PROTOCOL

As stated above, the primary concern of the Supervisor and the student is to submit to the Committee of Undergraduate Theses of the respective Program the final title and a brief proposal on the approach of the topic they intend to address.

The proposal will cover, as a minimum, the following sections:

STRUCTURE OF PROPOSAL – PROTOCOL FOR RESEARCH THESIS

Title (up to 20 words)

The title must be clear and concise and present the substance of the study to be pursued.

Abstract (200-300 words)

Brief summary of the purpose, significance and methodology of the study without including bibliographical references, illustrations and tables. It outlines all the main points of the study, allowing the reader to form a comprehensive view of the proposed work. Apart from the introduction, the abstract is drafted in the future tense as it describes something to be conducted in the future.

The abstract has the following structure:

Introduction: Summary of the bibliographical review of the topic in 2-3 sentences.

Purpose: It states the purpose of the research work in 1-2 sentences.

Sample and Method: Reference to the sample of the research and the place where it has been conducted (without disclosing the identity of the location) as well as to the methodology used for data collection.

Keywords: 3-6 keywords which must correspond to the international lexicography terms used by Index Medicus (MeSH).

Introduction (2-4 pages)

Theoretical background

General and brief presentation of the topic. Concepts are clarified and relevant definitions are described.

Description of the problem

Description of the problem giving rise to the research questions.

Existing knowledge

Summary of the existing knowledge which is only **directly** related to the research questions and the variables of the study. References to general studies which do not support the hypotheses or the research design of the study are avoided. For each study, include 2-3 sentences on the design, key findings and main conclusions, without going into great detail or making extensive references to a specific study. Care is taken to link these studies both between them and with the question under investigation. At the end of this section, reference must be made to what previous studies have not answered, where lies the innovation of the specific study and what gap it aspires to fill.

Purpose and specific objectives (0.5 page)

Purpose

The general purpose is stated in one sentence. The next sentence offers an analysis of the purpose with reference to the specific variables and the research question to be approached.

Specific objectives

Brief reference to numbered specific objectives of the study, i.e. the specific hypotheses and research questions to be examined. Reference to the specific variables and the relations or differences to be studied.

Innovation of research proposal – Enhancement of existing knowledge – Added value and benefit (0.5 - 1 page)

This section states why the proposed study is important for the population under review, how it will contribute to the promotion of the discipline with new knowledge and its significance for the practice and/or theory of the discipline, with special reference to the specific subject area of the Program of Studies for which the Undergraduate Thesis is conducted.

Methodology (2-4 pages)

This section includes a description of the methods and means to be used in order to achieve the study's purpose and objectives.

Research design

E.g. correlation study or prospective study or "patients-controls" study or randomised, experimental double-blind study.

Material

a. Location and Time of conduct of the study

Brief description of the characteristics of the location of the study, the mode of access and the time of conduct.

E.g. Nicosia General Hospital, Strovolos Health Centre, conducted in the period from January 2014 to December 2015. The Department's head nurse and doctor have been informed and given their consent.

b. Sample of participants

Reference to the sampling strategy and the size of the sample, the method of approach and the process of informed consent. Criteria of inclusion to the protocol and exclusion from the study.

c. Tools

Description of the tools used for measuring the variables (e.g. questionnaires, scales, laboratory equipment), justification and psychometric features. Reference to the empirical evidence of their validity and reliability.

d. Data collection method

Brief but accurate description of all the procedures to be followed, from the commencement of the study to the completion of data collection. Special emphasis is given to ethical and moral issues, e.g. how the secrecy and anonymity of participants will be safeguarded.

e. Statistical analysis and data processing

Brief but accurate description of all the statistical tests to be used with reference to the specific hypotheses and/or research questions.

f. Limitations and weaknesses of the study

Brief description of any problems in the design, the hypotheses, the sampling and the methods which cannot be improved due to practical reasons (limited time or financial resources).

Ethical issues (1 paragraph)

Possible benefits for the participants and process of informed consent. A protocol will be submitted to the National Bioethics Committee, the Office of the Commissioner for Personal Data Protection and the Research Promotion Committee of the Ministry of Health.

Bibliography

List of the bibliographical references used in the drafting of the protocol in accordance with the referencing system of Harvard Anglia Ruskin University or of the American Psychological Association (APA – for Speech Therapy).

Time frame (Table)

The time sequence and the time frames within which the various activities of the research work will be conducted.

Annexes

- i. Informed consent form
- ii. Questionnaires/Scales
- iii. Approvals from competent organizations (if obtained)

(Attention: In drafting the protocol, the present and future tenses must be used).

STRUCTURE OF PROPOSAL – PROTOCOL FOR BIBLIOGRAPHICAL REVIEW

Title (up to 20 words)

The title must be clear and concise and present the substance of the study to be pursued. The words "bibliographical review" must be stated at the end.

Abstract (200-300 words)

Brief summary of the purpose, significance and methodology of the study without including bibliographical references, illustrations and tables. It outlines all the main points of the study, allowing the reader to form a comprehensive view of the proposed work. Apart from the introduction, the abstract is drafted in the future tense as it describes something to be conducted in the future.

The abstract has the following structure:

Introduction: Summary of the bibliographical review of the topic in 2-3 sentences.

Purpose: Purpose of the paper in 1-2 sentences

Methodology: Description of the search strategy and more specifically reference to the database(s) used in the search for articles, the keywords to be used in the search and also their combination. Finally, reference to the inclusion or exclusion criteria of a study from the review.

Keywords: 3-6 keywords which must correspond to the international lexicography terms used by Index Medicus (MeSH).

Introduction

The Introduction may follow the A or B type as directed by the supervisor. However, each student should follow only one type.

Type A - Introduction (2-4 pages)

Theoretical background

General and brief presentation of the topic. Concepts are clarified and relevant definitions are described.

Existing knowledge

Summary of existing knowledge (since at this stage no comprehensive analysis of the bibliography has been conducted) and presentation of what is generally known from studying the bibliography to this day on the topic in question. For each study, include 2-3 sentences on the design, key findings and main conclusions, without going into great detail or making extensive references to a specific study. Care is taken to link these studies both between them and with the question under investigation.

Description of the problem

Explanation of the need to conduct a review of the research bibliography on the specific topic (e.g. summary of existing scientific

knowledge, identification of contradictions or gaps in the bibliography).

Purpose and specific objectives (0.5 page)

Clear statement of the purpose and specific objectives of the review.

Enhancement of existing knowledge – Added value and benefit (0.5 - 1 page)

This section states why the proposed study is important for the population under review, how it will contribute to the promotion of the discipline with new knowledge and its significance for the practice and/or theory of the discipline, with special reference to the specific subject area of the Program of Studies for which the Thesis is conducted.

Type B - Introduction (2-4 pages)

General presentation of the subject. Concepts are clarified and definitions are described. Explains the need to conduct a review of the research literature on the subject (eg presenting existing scientific knowledge, identifying inconsistencies or gaps in the literature, lacking guidelines). The purpose and objectives of the review are clearly stated. The existing knowledge is described in detail and what is generally known from literature studies to date on the subject under discussion. Provision is made for interconnecting the reported studies both with each other and with the issue under investigation.

Methodology

The Introduction may follow the A or B type as directed by the supervisor. However, each student should follow only one type.

Type A - Methodology (2 – 4 pages)

This section includes a description of the methods and means to be used in order to achieve the study's purpose and objectives.

Description of the search strategy

Description of the search strategy, in other words:

- a. The database(s) in which the articles will be searched,
- b. The keywords to be used in the search, as well as their combination.

Your search strategy will be presented in a table (see Table 1 for a relevant example) – It is not necessary to include in the protocol the number of articles you have identified.

Points requiring attention:

- a. The bibliographical review must be conducted in valid online databases, e.g. MEDLINE, PubMed, Scopus, etc.
- b. In the keywords avoid the use of sentences.

Study inclusion – exclusion criteria

Presentation of the criteria for the inclusion or exclusion of a study from the review. These criteria may include the type of the study, the characteristics of the participants, the location where the study has been conducted, the variables under review, the measurement tools, etc.

The strategy to be followed for the number of studies which will be checked and assessed against the fulfillment of the inclusion criteria in order to be included in the review will be presented in an indicative flow chart (see Illustration 1).

Type B - Methodology (2 - 4 pages)

This section includes a description of the methods and means to be used in order to achieve the study's purpose and objectives.

Description of the search strategy

Description of the search strategy, in other words:

- c. The database(s) in which the articles will be searched,
- d. The keywords to be used in the search, as well as their combination.

Points requiring attention:

- c. The bibliographical review must be conducted in valid online databases, e.g. MEDLINE, PubMed, Scopus, etc.
- d. In the keywords avoid the use of sentences.

Study inclusion – exclusion criteria

Presentation of the criteria for the inclusion or exclusion of a study from the review. These criteria may include the type of the study, the characteristics of the participants, the location where the study has been conducted, the variables under review, the measurement tools, etc.

Bibliography

List of the bibliographical references which have been used in the drafting of the protocol in accordance with the referencing system of the Harvard Anglia Ruskin University or of the American Psychological Association (APA – for Speech Therapy).

Time frame (Table)

Presentation of the time sequence and the time frames within which the specific activities of the research will be conducted.

Annexes (Only in Types A)

Table with the search strategy and the keywords to be used and flow chart presenting the results of the search strategy.

(Attention: In drafting the protocol, the present and the future tenses must be used. In case the student wishes to carry out a systematic review, consult the separate file titled Structure of systematic review).

Table 1:	Search	strategy	and	keywords	to	be	used	in	the	identification	of	studies
	investig	ating the	relati	onship betv	wee	en c	entral	ob	esity	and dementia	a	

	Keywords	Number of identified articles
	1. central obes*	
	2. visceral obes*	
	abdominal obes*	
	4. waist circumference	
Central obesity –	5. waist to hip ratio	
Exposure	6. waist-to-hip	
	7. waist-to-hip-ratio	
	8. WHR	
	9. Sagittal Abdominal Diameter	
10.#1 OR #2 OR #3 OR #4 OR	#5 OR #6 OR #7 OR #9	
	11. Alzheimer's disease	
Domontia Outoomo	12. Alzheimer disease	
Dementia – Outcome	13. vascular dementia	
	14. dementia	
15.#11 OR #12 OR #13 OR #1	4	
	16. cohort	
	17. prospective	
Posearch design of the	18. longitudinal	
study	19. follow-up	
Study	20. incidence	
	21. risk	
	22. rate	
23. #16 OR #17 OR #18 OR #1		
24.#10 AND # 15 AND # 23		



Illustration 1: Methodology to be used for the final selection of the studies to be reviewed.

PROCESS OF PROTOCOL SUBMISSION

Here follow the steps and time frame for the preparation, submission and defense of the Undergraduate Thesis protocol:

Following the finalization of the topics, the proposer confirms the commencement of his/her collaboration with the students, in order to launch the drafting of the protocol. The first student-supervisor or supervisor-student communication takes place. The protocol is prepared, submitted by the student in the first of the two semesters during which the Undergraduate Thesis is conducted (7th semester for four-year Programs and 9th semester for five-year Programs).

As soon as the student and the supervisor finalize the text of the protocol, they submit it via the e-learning platform (Moodle) within the deadline granted for the semester in question, usually in the first week of December.

Following the submission, the Undergraduate Theses Committee of the BSc Biological Sciences Program confirms that it has received the file and that it satisfies the specifications of these. A two-member committee is appointed, comprising one or two members of the TRP / an Associate of the Program and/or the professor in charge. The professor in charge gives the final grade for the protocol.

Follow the submission, the Undergraduate Theses Committee of the BSc Biological Sciences Program confirms that it has received the file, and that it satisfies the specifications of these, and sets a support date, which is usually the last week before Christmas break. A Bilateral Committee is appointed consisting of 1 or 2 faculty members / Program Partner and / or the professor in charge. Wherever possible, efforts are made to involve the supervisor of each proposal. At the time of the oral presentation, the student presents the main points of his / her protocol for 7-10 minutes, then receives clarification questions and suggestions from the committee.

Thereafter, in case of major revisions, a new deadline is granted for the resubmission of the protocol (usually after the following exam period), otherwise the student adopts the recommended suggestions / amendments to the protocol, provided the proposer is in agreement. These are checked under the responsibility of the supervisor and immediately afterwards the student can begin to work on the Undergraduate Thesis.

DURATION OF EXECUTION OF THE THESIS

As a rule, the total duration of the execution of the Undergraduate Thesis is one (1) or two (2) academic semesters depending on the Study Program.

In the BSc Biological Sciences program the Undergraduate thesis is presented as two different courses (Undergraduate Thesis I & Undergraduate Thesis 2) during the first semester students prepare and submit (and present only in Department of Life Sciences) the protocol and is graded as a regular course. Upon successful completion on the protocol, students enroll in Undergraduate Thesis 2, where the thesis is being written. This can be extended up to 2 additional academic semesters, in case it is not completed. In this case, the student receives an "I" (Incomplete). If, after the end of the two subsequent semesters, the Undergraduate Thesis has not

been completed, the student receives an "F" (Fail) and enrolls again for the course in the next semester in which it is offered.

The ECTS academic units for the declaration of the Thesis are granted to the student in one semester only, and specifically in the semester in which the Undergraduate Thesis is declared. In case of failure, the student must enroll again in the course and will be granted the ECTS units again. The student is also granted the credit units corresponding to the course. The ECTS credits are described in the syllabus of the course. For the BSc Biological Sciences program the ECTS credits are 6 and 6 for the HLS400 and HLS420, respectively.

ASSESSMENT OF THESIS

The final deadline for the submission of the Final Undergraduate Thesis to the proposer for preliminary check, and provided the corrections of the various sections have been made during the supervision of the Undergraduate Thesis in the semester of execution, is set at two weeks before the end of the normal duration of semester courses (Fall, Spring) and one week before the end of the normal duration of Summer semester. The process preceding the presentation is set out in the time frame below.

	Time frame	Prior to the Presentation *					
		Round 1	Round 2	Round 3			
		Spring	Fall	Summer			
1	Dispatch of Final Thesis by the student to the Supervisor	5 weeks	5 weeks	4 weeks			
2	Dispatch of the Thesis back to the student and final corrections.	4 weeks	4 weeks	3 weeks			
3	Submission of Thesis via the Moodle platform (HEA410) by the student	3 weeks	3 weeks	2 weeks			
4	Corrections and marking by Member 2 (Chair of the Committee for each Thesis) and dispatch of comments and grade to the proposer and the professor in charge	2 weeks	2 weeks	1 week			
	1. If the Chair of the Committee fails to send comments, this amounts to positive acceptance of the Thesis as is (without this releasing the Chair from the obligation to send a grade)						
5	The student makes any changes and corrections to the Thesis based on the feedback and thereafter submits the final text to the proposer for purposes of final confirmation.	10 days	10 days	5 days			
	1. If the student fails to make any changes / corrections / improvements, the supervisor may decide either to accept the Thesis as is or reject it with an F grade (Fail).						

6	The Supervisor reads the final text, marks it and grants the student the final approval that the Thesis is ready.	7 days	7 days	3 days
7	The student completes the Thesis (if necessary) and submits it to Moodle for archiving.	5 days	5 days	2 days
8	The student proceeds to the oral defense of his/her Thesis.	Day of the presentation	Day of the presentation	Day of the presentation

* Public holidays are not taken into consideration in the above time frame.

As a rule, the Undergraduarte Theses are presented in the week following the end of the final June examinations (for submission in the Spring Semester) or the week after the end of the final January examinations (for submission in the Winter Semester) or the week after the end of the final July examinations (for submission in the Summer Semester).

SUBMISSION OF THESIS FOR CORRECTIONS

In case the Undergraduate Thesis is not delivered within the set time frame, the process of assessment and presentation is postponed, automatically and without derogations, until the next academic semester (Fall, Spring or Summer), again subject to the set time frames.

The Undergraduate Thesis is delivered online (MSWord<20Mb file) and via the online platform. It is pointed out that the student can <u>in no case submit</u> the text in print form as this does not facilitate the follow-up of the corrections and comments, whilst resulting in unnecessary and needless financial cost.

The correction and marking of the single text of the Undergraduate Thesis by the members of the Committee will take place as follows:

- i. Member A (Chair of the Committee): Within 1 week from receiving the Thesis.
- ii. Member B (Proposer): Within 2 days from receiving the Thesis.

The written text of the Undergraduate Thesis is corrected electronically using the "Review/Track Changes" option in MS Word where corrections are made and any comments are inserted using the "New Comment" option. Once corrections are completed, the electronic file is forwarded by the Supervisor to the student for the necessary adjustments after explaining to him/her orally the full range of the corrections/remarks.

If the above time frame is respected, the preliminary corrections to the Thesis by Member 2 will have been completed precisely at the end of the exam period of the academic semester in question, and thereafter the student will be granted 10 days (in the Fall and Spring period) to make the corrections received in order to submit his/her text for marking to the proposer, and then proceed to the final submission via Moodle and to the oral defense of his/her Undergraduate Thesis.

PRESENTATION OF THE THESIS

Once the check has been completed and the Supervisor verifies that the modifications to the text have been made, the student prepares for the oral defense on the set date.

Theses which, according to the Committee of Undergraduate Theses of the BSc Biological Sciences program, do not satisfy the requirements for oral defense, will be returned to the Supervisor with comments and their defense will be postponed until the next period of presentations within the following academic semester, provided all requirements have been satisfied.

APPOINTMENT OF TWO-MEMBER ASSESSMENT COMMITTEE

The Committee of Undergraduate Theses of the BSc Biological Sciences program appoints the Two-member Assessment Committees which comprise the Supervising Professor (as member) and 1 independent examiner, who is a member of the Program's teaching personnel and will act as chair of the Committee. For purposes of consistency in the marking of the Theses and the assigned grades, where feasible, the Assessment Committees of the Theses will be chaired only by members of the Theses or the Professor in charge, in the context of which the Undergraduate Theses are conducted, and on condition that they will not act as chairs for Undergraduate Theses which they supervise.

The assessment of the Undergraduate Thesis comprises two stages. The first one regards the assessment of the written text and is carried out before the presentation and the second regards the oral defense of the Thesis and is carried out at the time of the presentation. The marking forms are prepared by the supervisor together with the remuneration forms (for both Members) and are placed in the locker of the Professor in charge of the course for approval, who will in turn verify and send the student's grade to the Secretariat.

MARKING OF THE THESIS

WRITTEN TEXT

The assessment and marking of the written text is a key prerequisite for the oral defense of the Undergraduate Thesis. Only when the Thesis is considered adequate, even with recommendations for minor corrections by the Two-member Assessment Committee and provided it receives a minimum pass grade (30/60), will the student be given permission to proceed to the oral defense of the Thesis. The written text of the Thesis is assessed using the "Review / Track Changes" option in MS Word, where corrections are made to the text, whilst any comments are inserted using the "New Comment" option. The assessment is based on clearly defined criteria laid down in the relevant form (see Annex on page 62).

The grade assigned by each member of the Two-member Assessment Committee to the written text of the Undergraduate Thesis has a different weight and is allocated as follows:
- i. Member B Chair of the Committee: 40/60
- ii. Member A (Proposer): 20/60

On completion of the assessment of the written text, the relevant marking forms are collected by the Proposer who brings them to the oral presentation for completion and signing. Three (3) working days before the oral presentation, the Committee of Undergraduate Theses of the Program determines the time and place of the oral defense of the Thesis and makes all necessary arrangements (reservation of room, provision for electronic means and technical support). He/she then informs accordingly by email the members of the Two-member Assessment Committee and the student who, under the responsibility of his/her Supervisor, has the obligation to post a relevant announcement on the Department's announcement board The program of presentations of the Theses will also be posted on the page of the course on the Moodle platform under the responsibility of the Professor in charge of the course.

ORAL DEFENSE OF THE THESIS

The defense of the Undergraduate Thesis through an oral presentation by the student is carried out using "powerpoint" or a similar software program. The presentation takes place in a University room, as arranged by the Committee of Undergraduate Theses of the Program, and lasts **7-10** min. in case the Thesis has been conducted by one person and **12-15** min. in case it is the result of collaboration. After the presentation, students are examined by the Two-member Assessment Committee for not more than **20 min**. On completion of the examination, the Committee meets in the absence of the student to determine the final grade as it arises from the presentation, whilst making relevant comments/remarks on the presentation which are announced to the student forthwith.

The guidance and supervision of the preparation of the Thesis presentation by the student are part of the Supervisor's obligations. The process of presentation and examination of the Undergraduate Theses are open to the public and anyone wishing to attend is welcome to do so, but has no right to comment, unless the Chair of the Two-member Assessment Committee decides otherwise. In any case, comments made by the public follow the examination and marking by the members of the Two-member Assessment Committee and are therefore not taken into consideration in determining the grade. The oral defense of the Undergraduate Thesis is assessed based on clearly defined criteria laid down in the relevant form (see Annex on page 63).

The grade assigned by each member of the Two-member Assessment Committee during the oral defense of the Thesis is of equal weight and is allocated as follows:

- i. Chair of the Committee: 20/40
- ii. Member A: 20/40

Each member of the Two-member Assessment Committee must attend the defense of the Thesis, either as Proposer or as Examiner. In case the Proposer or the Chair of the Committee is prevented from attending, the Committee of Undergraduate Theses of the Program must be notified in writing at least 5 days prior to the date of the examination in order to be able to set a new date.

OUTCOME OF THE THESIS

The Two-member Assessment Committee of the Thesis assesses and accepts or rejects the student's Thesis in accordance with the criteria stated in the form of assessment of the written text, as laid down in the Annex (page 62). The Committee has the right:

- i. To accept the Thesis as is and proceed with the presentation;
- **ii.** To accept the Thesis after recommending to the student minor corrections and modifications, to be made in fixed short period of time (10 days) and checked by the Supervising Professor and proceed with the presentation;
- iii. Not to accept the Thesis as is, but recommend broad modifications and corrections. Once these are completed within a fixed period of time (30 days), the Thesis will be submitted again for defense and assessment by the same Committee, at a time set by the Committee of Undergraduate Theses of the Program;
- **iv.** Not to accept the Thesis, but recommend substantial modifications and improvements to be made within a fixed period of time (60 days), followed by a new submission for assessment by the same Committee;
- **v.** To reject the Thesis and consider that the student has failed the course ("F": Fail), in which case the student must repeat the process from the beginning.

ENTRY OF COURSE GRADE

SUBMISSION OF GRADE TO THE SECRETARIAT

Once the examination is complete, the Proposer places within 3 (three) working days in the locker of the Professor in charge of the course, the marking forms relating to the written text and the oral defense of the Thesis as well as the remuneration forms (Member A and Member B) for further processing.

ISSUANCE OF GRADE

On completion of the above process, it is considered that the student has fulfilled his/her obligations in relation to the course and therefore the Professor in charge checks and forwards the markings forms to the Secretariat for the issuance of the grade and the remuneration forms to the Chair of the Department.

DESCRIPTION OF THE STRUCTURE OF THE DIFFERENT TYPES OF THESES

TYPES AND LENGTH OF THESES

The Thesis may be in the form of a "**Bibliographical Review**" (Type A or Type B) (Narrative or Critical), a "**Systematic Review**", or a complete "**Research Thesis**" with collection and processing of data. The thesis is undertaken by up to 2 (two) students.

The length of the Thesis, which relates <u>only to the Main Part of a Thesis</u> is determined as follows:

For programs where Syllabus designates ECTS credits equal to 12:

1. Bibliographical Review (Type A or Type B):

- i. One person: 8,000 11,000 words.
- ii. Two persons: 12,000 15,000 words.
- 2. Systematic Review:
 - i. One person or two persons: 8,000 11,000 words.

3. Research Thesis

- i. One person: 8,000 11,000 words.
- ii. Two persons: 12,000 15,000 words.

For programs where Syllabus designates ECTS credits equal to 6:

4. Bibliographical Review (Type A or Type B):

- iii. One person: 6,000 9,000 words.
- iv. Two persons: 10,000 13,000 words.
- 5. Systematic Review:
 - ii. One person or two persons: 6,000 9,000 words.

6. Research Thesis

- iii. One person: 6,000 9,000 words.
- iv. Two persons: 10,000 13,000 words.

Once completed, the Thesis must respect the specific structure analysed in detail here below depending on its type.

FINAL LAYOUT OF RESEARCH THESIS

Once the Thesis is completed and before its submission to the Supervisor for corrections, great care must be taken by students to ensure that it complies with the proper structure and development and is easy to read and accurate. The pagination of the Thesis must follow the order below:

<u>Cover</u>

Preliminary Pages

<u>Title Page</u> <u>Copyright Page</u> <u>Assignment of Copyright Page</u>

\rightarrow given by the Professor in charge at HEA410-DLS under the name Front_Pages.docx

Abstract

Preface (optional) Acknowledgements Section **Dedication Section** Table of Contents, with reference pages List of Tables, with titles and reference page List of Figures, with titles and reference page List of Illustrations, with titles and reference page List of Photographs, with titles and reference page Main Part of the Thesis Introduction Chapter Brief presentation of bibliography and articles Purpose Objectives Research and statistical hypotheses Key requirements Limitations Theoretical and functional definitions Abbreviations Symbols **Bibliography and Article Review Chapter** Methodology Chapter Research design Material (Location and time of conduct of the study, Sample, Tools) Data collection method Statistical analysis and processing of data Ethical issues **Results Chapter Discussion Chapter**

Conclusions Chapter

Bibliography (referencing system of Harvard Anglia Ruskin University or of the American Psychological Association (APA – for Speech Therapy)

Annexes (if any).

FINAL LAYOUT OF REVIEW THESIS

Once the Thesis is completed and before its submission to the Supervisor for corrections, great care must be taken by students to ensure that it complies with the proper structure and development and is easy to read and accurate. The pagination of the Thesis must follow the order below:

<u>Cover</u>

Preliminary Pages

Title Page

Copyright Page

Assignment of Copyright Page

→given by the Professor in charge at HEA410-DLS under the name Front_Pages.docx

Abstract

Preface (optional)

Acknowledgements Section

Dedication Section

Table of Contents, with reference pages

List of Tables, with titles and reference page

List of Figures, with titles and reference page

List of Illustrations, with titles and reference page

List of Photographs, with titles and reference page

Main Part of the Thesis

Introduction Chapter

Introduction Chapter (Type A)

Theoretical background

Existing knowledge

Description of the problem

Purpose and specific objectives

Enhancement of existing knowledge – Added value and benefit

Or Introduction Chapter (Type B)

Methodology Chapter

Methodology Chapter (Type A)

Description of search strategy

Study inclusion – exclusion criteria

Final selection of studies of the review

Assessment of the quality of the studies (optional)

Or Methodology Chapter (Type B)

Results Chapter¹

Discussion Chapter

Conclusions Chapter

Bibliography (referencing system of Harvard Anglia Ruskin University or of the American Psychological Association (APA – for Speech Therapy).

In particular, for each specific part of the Thesis the following apply.

PRELIMINARY PAGES

It is noted that the preliminary pages have the same structure irrespective of the type of the Thesis.

COVER

The cover includes:

the logo of the University,

the School, the Department and the student's Program of Study,

the title of the Thesis,

the name of the student or students and their University registration number,

the name and title of the Supervising Professor,

the place where the thesis was conducted and the date of acceptance.

TITLE PAGE

The title page of the Undergraduate Thesis must contain the following:

The title of the Thesis, positioned in the centre, 5 cm from the top of the page. The title must be clear and concise and present the substance of the study pursued. In case the Thesis is a bibliographical review, the two words "bibliographical review" must be stated at the end.

The name of the student, positioned in the centre, 2.5 cm under the title.

- The following statement, inside full margins, positioned 2.5 cm under the author's name: Thesis submitted to the body of professors in partial fulfillment of the requirements for the BSc Degree of the Program... (enter the respective name of the Program, e.g. Biological Sciences) of the Department of Life Sciences, of the School of Sciences of European University Cyprus.
- The following words are positioned in the lower half of the page, in the centre: Nicosia? 20... (The year on the title page must refer to the location where the study was conducted and the year of acceptance of the Thesis).

The following words are stated on the right: Approved by: ...The names of the Two member Examining Committee are stated in the lines below.

COPYRIGHT PAGE

In case the student wishes to copyright the Undergraduate Thesis, the copyright page must be included, after the title page, with the following information written in the center, in the lower half of the page:

© Year, Full Name ALL RIGHTS RESERVED

ASSIGNMENT OF COPYRIGHT PAGE

With this page, European University Cyprus is granted permission to use the Thesis for purposes of the University, as well as to print and make copies available to the public on a non-profit making basis, in case copies are not available in any other way.

ABSTRACT

The abstract will follow the title page (and the copyright page, if any) and must be included in the Table of Contents.

The word "ABSTRACT" of the Thesis is typed in 1½ line spacing, Arial 12 font, in fully justified formatting. It is positioned centrally, at a distance of 5 (five) cm from the top of the page. It is followed by the name of the student and the title of the Thesis. In brackets, in the centre under the title, follows the phrase (Under the supervision of

_____) which states the name of the Supervising Professor. This is followed by an empty line and the text of the abstract, in 1½ line spacing. The abstract must be printed on one side of the page only and in one single paragraph. The margins of the abstract must comply with the relevant instructions stated in the Annex to this Guide. The abstract of the Thesis must not exceed 300 words. It is written in Greek and optionally in English.

The title of the abstract must follow the same formatting as that of the title page. In general, the inclusion of mathematical formulas, diagrams and illustrations in the abstract is avoided. The abstract is a brief description of the Thesis and must be accurate and comprehensive so as to reflect the purpose and the content of the research, whilst lengthy explanations and personal views must be avoided. Also, the abstract must be self-contained, i.e. it must describe all the parts of the research. The abstract must help the reader understand in a few sentences what has been studied, the reason why it has been studied and the conclusions that arise. The abstract is structured and contains the following sections:

Introduction Purpose Methodology Results Conclusions.

At the end of the abstract the keywords are stated (up to 6), which offer a more general description of the Thesis topic. In the case of a review, the keywords do not refer to the keywords to be used in the bibliography search.

PREFACE

The preface follows the abstract and is typed in 1½ line spacing, Arial 12 font, in fully justified formatting. The heading is titled "PREFACE" and is positioned in the centre, 5 (five) cm from the top of the page. The preface is an optional part of the Thesis and consists in a general reference to what is included in each chapter of the Thesis in relation to the topic addressed. This part also contains separate pages for dedication and acknowledgments, if any.

TABLE OF CONTENTS

The table of contents follows the abstract (and the preface, if any). The heading is titled "TABLE OF CONTENTS" and is positioned in the centre, five (5) cm from the top of the page.

The table of contents must include all the parts of the Thesis, including the preliminary pages (title page, abstract, preface, copyright page, acknowledgments page, dedication page). In the table of contents, the preliminary pages are numbered in Latin numerals while the pages of the main part of the Thesis are numbered in Arabic numerals. It also includes the bibliography section and all the annexes to the Thesis.

If the Thesis contains sub-titles of one and/or more levels, these must be included in the table of contents. The sub-title(s) must begin in a paragraph 3 (three) to 5 (five) tabs to the right of the margin for the titles of the chapters. The titles set out in the table of contents referring to the various chapters must accurately reflect the titles of the chapters contained in the body of the Thesis.

The page numbers in the table of contents must be positioned in the right margin, while the empty space between the title or the sub-title and the page number must be covered by a straight continuous or dotted line.

The spacing between two chapters must be double, the sub-titles within a chapter must have a $1\frac{1}{2}$ line spacing and if the reference to the corresponding sub-title extends to more than one line, it is interrupted at three quarters of the line and continues on the following line but with a single space.

LIST OF TABLES

Each table of the Thesis is defined with an Arabic numeral (for example Table 1, Table 2, etc.) or is defined with two parts of an Arabic numeral where the first digit refers to the chapter in which it is included, followed by a full stop, and the second digit indicates its sequence in the chapter (for example Table 3.2 refers to the second table of the third chapter).

The heading for the list of tables must be positioned at a distance of 2.5 cm from the top of the page, in the centre, and the phrase "LIST OF TABLES" must be written in capitals. Between the heading and the first title there must be an empty line. The line spacing between the titles must be double.

The number of each table (Arabic) and its title must be positioned in the left margin. The numbers of the pages (Arabic) are positioned exactly inside the right margin. The space between the tab and the page number is covered with a stippled line. The space between the table and its title is single while the space between the titles is double. If the title requires more than one line, this is interrupted at three quarters and continues below on a second line, with a single space. The number of the table and its title in the list of tables must accurately reflect those contained in the body of the Thesis.

LIST OF FIGURES

The heading for the list of figures must be positioned at a distance of 2.5 cm from the top of the page, in the centre, and the phrase "LIST OF FIGURES" must be written in

capitals. The instructions set out above on the list of tables also apply to the list of figures.

LIST OF ILLUSTRATIONS

The heading for the list of illustrations must be positioned at a distance of 2.5 cm from the top of the page, in the centre, and the phrase "LIST OF ILLUSTRATIONS" must be written in capitals. The instructions set out above on the list of tables also apply to the list of illustrations.

LIST OF PHOTOGRAPHS

The heading for the list of photographs must be positioned at a distance of 2.5 cm from the top of the page, in the centre, and the phrase "LIST OF PHOTOGRAPHS" must be written in capitals. The instructions given above on the list of tables also apply to the list of photographs.

RESEARCH TYPE THESIS

MAIN PART

The main part of the Thesis is typed in 1½ line spacing, Arial 12 font, in fully justified formatting. It must include the following sections.

INTRODUCTION

The text begins with the word "Introduction" and the title of the research as title of the first chapter written in bold letters. In the introduction, the student guides the reader towards an understanding of the topic, taking a shortcut. This chapter briefly describes any information regarding the topic and acquaints and prepares the reader for the more clarifying information that will follow in the main body of the Thesis. More specifically, the Introduction presents the problem whose resolution will be later attempted through the research, presents the purpose, the specific objectives, the research hypotheses (if any), states the requirements, the boundaries and the limitations of the research, which may be related to the sampling, the research design, the tools used for the collection of the results. Finally, it sets out the functional definitions and explains the abbreviations and symbols (where necessary).

In brief, the Introduction:

- Presents the problem and the research approach;
- Provides a short overview and presentation of the bibliography related to the problem;
- States the most relevant research on the topic of the Thesis;
- Refers to the importance of the research;
- Presents the purpose of the research;
- Accurately states, in 4-5 lines, the objectives of the specific research;
- Sets out the research and null hypotheses of the research (applies only to research protocols and experimental studies),
- States the key requirements, the limitations and the boundaries of the research;
- Also states the theoretical and functional definitions of key terms;
- Finally, it sets out the abbreviations and explains the symbols which may be included in the Thesis.

BIBLIOGRAPHY REVIEW

The review of the bibliography includes an extensive reference to relevant contemporary bibliography. The number of bibliography sources analysed in the Bibliography Review chapter varies depending on the type of the Thesis as follows:

i. **Research Thesis**: $\ge 8 - 12$ (1 person) $- \ge 15 - 20$ (2 persons) primary research sources.

It is noted that the above sources **do not include the material deriving from secondary sources** (books, review articles) usually used to present basic knowledge, e.g. anatomical information, physiological information, etc. The Bibliography Review represents a complex mental processing of primary data and its usefulness lies in the ability to inform the student on recent research developments in his/her field of study and enhance pre-existing knowledge related to the theory and exercise of evidence-based practice. Through the bibliography and article review, the student is called to study and analyse all contemporary developments on the topic under investigation, present comparisons and differences between them and recompose the existing knowledge, in order to present an original written work which will bear his/her personal stamp. In essence, a bibliography review is a form of organising information on a subject area, of systematic recording and drawing conclusions.

In the bibliography review, special care must be taken to focus on the topic under investigation and limit the inclusion of studies with more general conclusions. In analysing bibliography sources, insignificant details must be avoided whilst emphasis must be given to the relevant findings, the relevant methodological issues and the most important conclusions. The progression of the text follows a logical sequence between the older and more recent research, as well as between research with a different theoretical and conceptual basis. The problem is developed in such a way that it can be understood by the broader scientific public and not only by experts in the field under investigation. It is desirable to approach the research in question from a critical point of view and to address controversial conclusions fairly.

Primary sources must be analysed extensively (whilst secondary sources are only listed), in stand-alone paragraphs of approximately 8-12 lines, forming part of homogeneous sections. The stand-alone descriptions of the experimental research must be linked between them and, at the end of each section, a critical summary of the conclusions arising therefrom must be set out. At the same time, irrespective of the type of the Thesis, the main sources must be grouped in the form of tables briefly stating the following in columns

Study (source),

Country (where the research was conducted) Study Population (number, gender, age, characteristics) Intervention Type (what they were subjected to, what was administered to the participants), Intervention Setting (e.g. hospital, institution, workplace) Duration (the exact duration of the intervention) Efficacy (main results - conclusions)

In particular, the development and presentation of the primary sources must take into consideration the following:

Recording of information in chronological order Classification based on their thematic sections Classification based on the years publication Classification based on convergent or divergent views.

It is noted in particular that:

• The evidence set out must be valid and supported by evidence-based research.

- Information is strictly selected based on its relevance to the topic and publications of questionable origin and information from research involving corporate interests etc. are not included.
- Quotation marks must be used whenever information is copied or set out verbatim or paraphrased, although it is recommended that the student carries out the processing and systematic synthesizing of the information himself/herself. In case a piece of information is paraphrased, the student must be absolutely certain that he/she has reproduced precisely what the researcher meant in the relevant work.
- The third person must compulsorily be used in developing the texts. Nouns should not become subjects (for example instead of the phrase "the study showed that...." It is preferable to say "it was shown by the study that....").
- In all types of research, the bibliography review is written in the past tense.
- Both genders must be used (for example "he/she").
- Each section begins with a brief presentation of the topic to follow and ends with a summary of the information previously presented, focusing on the most important points.

METHODOLOGY

The title of the chapter is written in the middle of the page. The text begins below with a tab and usually includes the following sub-chapters which are written in small bold and italic letters, using one tab, and justified to the left. In this part, the student justifies his/her decisions relating to the methodology used and also states how he/she has addressed ethical issues of concern in the execution of the Thesis (permission from the Department's Committee of Ethics and Morals, permission from specific services, consent of participants in the research).

This part states the criteria and the mode of selection of the sample, the means and the equipment used, the procedures and the method followed and the statistical analysis. A detailed description allows other scholars-researchers to understand the entire process, verify the results and reproduce them if they wish.

Research design

The research design used in the Thesis, e.g. correlation study or prospective study or "patients-controls" study or randomised, experimental double-blind study is stated.

Material

a) Location and Time of conduct of the study

Brief description of the characteristics of the location of the study, its accessibility and the time of conduct. In case the study was conducted in a General Hospital, reference must be made to the necessary approvals obtained from the Research Promotion Committee of the Ministry of Health.

b) Patient sample

Sampling strategy and sample size, method of approach and process of informed consent. Criteria of inclusion in the protocol and exclusion from the study.

c) Tools

Description of tools used for measuring the variables (e.g. questionnaires, scales, lab equipment), justification and psychometric characteristics. Reference to the empirical evidence of their validity and reliability.

Data collection method

Brief but accurate description of all the procedures followed from the beginning of the study until the completion of data collection.

Statistical analysis and data processing

Brief but accurate description of the statistical tests used with reference to the specific hypotheses and/or research questions.

Ethical issues

After the end of the methodology, it is very important to state how the rights and anonymity of the subjects will be protected as well as the process of their written consent. In case the study required approval in terms of bioethical issues, the authority which has granted the approval must be mentioned (e.g. National Bioethics Committee, Office of the Commissioner for Personal Data Protection).

RESULTS

The title is positioned in the centre of the page like in the previous chapters. The results are then classified and written in a clear and comprehensible manner. Graphs, summary tables and mathematical formulas are set out in all detail. The illustration of a statistically or non-statistically significant difference allows the person studying the Thesis to identify what is being addressed. When the presentation of the results includes tables, the word "Table", justified to the left and in bold letters, must appear above the table, e.g. **Table 3.1**, followed by the title of the table (not in bold). In the case of figures, there must be a sub-title under the illustration, justified to the left, indicating the number of the figure and its explanation, e.g. Figure 3.1 Blood pressure variation rates following the administration of hypertension medication. Illustrations are marked in the same way as the figures. Attention: Both the text and the tables / figures / illustrations must be understandable to the reader and present the finding that you consider important. For this reason, the text must describe every table / figure / illustration and its main finding. On the other hand, each table / figure / illustration must be presented in such a way that the text is not necessary in order for the reader to be fully informed. In other words, the title must be explanatory and the structure and content must be understandable. Therefore, if a reader does not read the text, he/she should be able to understand the main finding from the table / figure / illustration alone. The table / figure / illustration are used when they serve the scientific presentation of the results, otherwise their use is not meaningful. It is also possible to set out the annexes at the end of the Thesis, if the tables or the graphs take up a lot of space in the flow of the text.

More specifically, this chapter includes the following:

- **i.** Presentation of the demographic characteristics of the sample (e.g. gender, age, educational level) in a table and description thereof within the text.
- **ii.** Description of the statistical analyses for each one of the null hypotheses (e.g. the ANOVA analysis of variance was used to reject or accept null hypothesis No. 3).
- iii. Presentation of the statistical results. In case the results of statistical tests are presented (e.g. t-test for independent samples, ANOVA test, χ^2 test) the reader must be provided with the relevant information on the degree or value of the statistical test, the degrees of freedom and the level of statistical significance. For example, the results of the ANOVA statistical test are presented in the text I as follows: $F(_{5,150})= 5.75$, p>0.05. If a table presents evidence of a statistical analysis, the necessary statistical evidence must be set out under the table so that the reader can assess the test used. Tables of results from a statistical package are not acceptable for presentation in your Thesis unless they are properly processed. The appropriate results from these tables must be collected and presented in a new table written in Greek, which must bear an explanatory title and its structure and content must be understandable to the reader.

DISCUSSION

This chapter examines, interprets and classifies the results and sets out in brief the main results. Particular emphasis is given to the theoretical repercussions of the

results, but also to the validity of the conclusions. The discussion begins with a rewording of the purpose of the research and the research hypotheses, whilst stating clearly whether the results support the original hypotheses or not. Then follows a description of how the data support the answer(s) to the research question(s). Any similarities or differences between the results and other research clarify and confirm the conclusions. By comparing the findings of this study with those of other researchers, new and important elements are highlighted. The strengths and limitations of the study are presented (based on the methodology followed). The section ends with a clear statement (for example the consequences of the findings of the research) or with reflections based on the answer(s) to the research hypothesis(es).

CONCLUSIONS

The title is positioned in the middle of the page and the following must be included:

- **I.** One conclusion for each hypothesis,
- II. A brief correlation of the results with the results of other research,
- **III.** Recommendations for practical implementation,
- **IV.** Recommendations for future research.

RECOMMENDATIONS

The recommendations identify omissions, record deficiencies, suggest ideas, set out both the weak and firm views of the review whilst also recommending new aspects for investigation arising from the findings of the research approach which has been applied.

BIBLIOGRAPHY LIST

It sets out the list of bibliographical references used in drafting the Thesis in accordance with the referencing system of Harvard Anglia Ruskin University or of the American Psychological Association (APA – for Speech Therapy).

BIBLIOGRAPHICAL REVIEW THESIS

MAIN PART

The main part of the Thesis is typed in 1½ line spacing, Arial 12 font, in fully justified formatting. It must include the following sections:

INTRODUCTION INTRODUCTION (TYPE A)

The text begins with the word "Introduction" and the title of the research as title of the first chapter written in bold letters. In the introduction, the student guides the reader towards an understanding of the topic, taking a shortcut. This chapter briefly describes any information regarding the topic and acquaints and prepares the reader for the more clarifying information that will follow in the main body of the Thesis. The introduction comprises the following sections:

i. Theoretical background

This section includes a presentation of the topic based on international bibliography. Moreover, relevant definitions are briefly described, concepts are clarified and epidemiological data is presented (where applicable).

ii. Existing knowledge

Description of what is generally known from studying the bibliography on the topic to this day, without going into great detail and without merely listing a number of articles. An effort is made to group conclusions from previous studies (primary or reviews), with references to the corresponding articles of the researchers.

iii. Description of the problem

Explanation of the need to conduct a bibliographical review of the research bibliography on the specific topic (e.g. summary of existing scientific knowledge, identification of contradictions or gaps in the bibliography, absence of guidelines).

iv. Purpose and specific objectives

The purpose and the specific objectives of the bibliographical review are clearly stated.

v. Enhancement of existing knowledge – Added value and benefit

The reason for which the specific study for the specific population is innovative and how it will contribute through new knowledge to the promotion of the discipline as well as its significance for the practice and/or theory of the discipline are clearly stated.

INTRODUCTION (TYPE B)

The text begins with the word "Introduction" written in bold letters. In the introduction, the student guides the reader towards an understanding of the topic, taking a shortcut. This chapter briefly describes any information regarding the topic and acquaints and prepares the reader for the more clarifying information that will follow in the main body of the Undergraduate Thesis. The introduction comprises the following sections:

The subject is presented on the basis of international literature. It also describes relevant definitions, clarifies concepts and presents epidemiological data (where applicable).

The purpose and objectives of the bibliographic review are clearly stated.

This explains the need for a bibliographic review of the research literature on the subject (eg description of existing scientific knowledge, identification of contradictions or gaps in the literature, lack of guidelines).

It describes what is known from literature studies to date on this subject. An attempt is made to group conclusions from previous studies (primary or review), referring to the relevant research articles.

METHODOLOGY METHODOLOGY (TYPE A)

This section describes the method and the means which have been used to achieve the purpose and the objectives of the study.

I. Description of search strategy

Description of the search strategy, in other words the following will be stated:

- a) The database(s) used in the article search;
- b) The keywords used in the search, as well as their combination. The search strategy must be presented in a table (see Table 2 below for a relevant example).
- **Table 2:**Search strategy and keywords to be used in the identification of studies
investigating the relationship between central obesity and dementia

	Keywords	Search Number	Number of identified studies
Central obesity – Exposure	central obes* OR visceral obes* OR abdominal obes* OR waist circumference OR waist to hip ratio OR waist-to-hip OR waist-to-hip-ratio OR WHR OR Sagittal Abdominal Diameter	#1	22 458
Dementia – Outcome	Alzheimer's disease OR Alzheimer disease OR vascular dementia OR dementia OR cognitive OR cognition	#2	298 435
Research design of the study	cohort OR prospective OR longitudinal OR follow-up OR incidence OR risk OR rate	#3	48 73483

#1 AND #2 AND #3	#4	217
II. Study inclusion – exclusion criteria The inclusion or exclusion criteria of a study from t	he review ii	terms of the
following:		
a) Type of studies		
b) Characteristics of participants		
c) Place of conduct		
d) Type of intervention		
e) Other general criteria		
III. Final selection of studies of bibliographical revie The number of studies which have been checked a	w and assesse	ed in terms of

fulfillment of the inclusion criteria in each stage and the final number of studies included in the review. It would also be advisable to justify in brief the reasons for which studies have been excluded from the review. This information will be presented in brief in a flow chart (see example in Illustration 2).



Illustration 2: Diagram illustration of the flow of results in the bibliography search

METHODOLOGY (TYPE A)

This section describes the method and the means which have been used to achieve the purpose and the objectives of the study.

I. Description of search strategy

Description of the search strategy, in other words the following will be stated:

- a) The database(s) used in the article search;
- b) The keywords used in the search, as well as their combination.

II. Study inclusion – exclusion criteria

The inclusion or exclusion criteria of a study from the review in terms of the following:

- a) Type of studies
- b) Characteristics of participants
- c) Place of conduct
- d) Type of intervecntion
- e) Other general criteria

RESULTS

Presentation of the results of the research studies which have been reviewed. This section usually begins with a general description of the results of the search.

The review of the bibliography includes an extensive reference to relevant contemporary bibliography. The number of bibliography sources analysed in the results chapter varies depending on the type of the Thesis as follows:

i. Bibliographical review (Type A or Type B) : \geq 20 - 25 (1 person) - \geq 35 - 40 (2 persons) primary research sources.

It is noted that the above sources do not include the material deriving from <u>secondary</u> <u>sources</u> (books, review articles) which is usually used to present basic knowledge, e.g. anatomical information, physiological information, etc.

Example – The 12 epidemiological studies included in this review were conducted in several countries situated in Europe and America. More specifically, 7 studies were conducted in Europe (Germany, France, Netherlands, Sweden and Finland respectively) while the remaining 5 studies were conducted in America (USA and Canada respectively).

 Table 3:
 Characteristics of the studies

STUDY	COUNTRY	STUDY POPULATION NUMBER (N) GENDER (G) AGE (A) Characteristics (Char.)	TYPE OF INTERVENTION	INTERVENTION SETTING (HOSPITAL, INSTITUTION, WORKPLACE)	DURATION	EFFICACY	
						CLINICAL SYMPTOMS	NEUROPHYSIO- LOGICAL PARAMETRES
Harter, et al. (1992) Retrospective study	USA	N: 265 G: 43%M / 57%F (114F / 151A) A (median and range: 45 yrs (20-90) S:49 yrs (median) C:42 yrs (median)	Surgery (77) (95 wrists) Vs Conservative treatment with various interventions ¹ (188)	N/A	54 months	S: Yes C: Yes ²	S: Yes C: We don't know
Seror (1992) Prospective observational study	France	N: 125 wrists G: S: 76%F / 24%M C:81%F / 19%M N.T: 79%F / 21%M A (median and range) in years: S: 57,5 (30-88) C: 58,6 (28-87) N.T.: 57,6 (28-87) Char.: Duration of symptoms (months) S: 23,3 C: 22,9 N.T.: 20,9	Surgery (33 wrists) Vs 1-3 doses of steroid injections (56 wrists) Vs No treatment (N.T.) (36 wrists)	Investigation laboratory	52 months	N/A	S: Yes C: No N.T.: slow deterioration

S= Surgical intervention, C= Conservative treatment, N.T.= No treatment, N/A= Not Stated

In general, the results must include the following:

Type A

- i. One table (and/or more, depending on the thematic presentation) presenting in brief, and usually in chronological order, the main characteristics of the studies (e.g. year of publication and country where the study was conducted, type of the study, population characteristics of participants, assessment of exposure and outcome, key findings, etc.) which are described in detail in the text (see example in Table 3 above).
- ii. Detailed presentation and description of the studies in the text, attempting a combination of the indications from different research. This can be done grouping research results or types of studies.

Type B

 Detailed presentation and description of the studies in the text, attempting a combination of the indications from different research. This can be done grouping research results or types of studies.

In general, the Bibliographical Review represents a complex mental processing of primary data and its usefulness lies in the ability to inform the

student on recent research developments in his field of study and enhance pre-existing knowledge related to the theory and exercise of evidence-based practice. Through the bibliography and article review, the student is called to study and analyse all contemporary developments on the topic under investigation, present comparisons and differences between them and recompose existing knowledge, in order to present an original written work which will bear his/her personal stamp. In essence, a bibliographical review is a form of organising information on a subject area, of systematic recording and drawing conclusions.

In the review, special care must be taken to focus on the topic under investigation and limit the inclusion of studies with more general conclusions. In analysing bibliography sources, insignificant details must be avoided whilst emphasis must be given to the relevant findings, the relevant methodological issues and the most important conclusions. The progression of the texts follows a logical sequence between the older and more recent research, as well as between research with a different theoretical and conceptual basis. The problem is developed in such a way that it can be understood by the broader scientific public and not only by experts in the field under investigation. It is desirable to approach the research in question from a critical point of view and to address controversial conclusions fairly.

Primary sources must be analysed extensively (whilst secondary sources are only listed), in stand-alone paragraphs of approximately 8-12 lines, forming part of homogeneous sections. The stand-alone descriptions of the experimental research must be linked between them and, at the end of each section, a critical summary of the conclusions arising therefrom must be set out. At the same time (except for type B Review), irrespective of the type of the Thesis, the main sources must be grouped in the form of tables briefly stating the following in columns

Study (source),
Country (where the study was conducted)
Study Population (number, age, age, characteristics)
Type of Intervention (what they were subjected to, what was administered to the participants),
Intervention Setting (e.g. hospital, institution, workplace)
Duration (the exact duration of the intervention)
Efficacy (main results – conclusions)

In particular, the development and presentation of the primary sources must take into consideration the following:

- Recording of information in chronological order
- Classification based on the thematic sections
- Classification based on the years of publication
- Classification based on convergent or divergent views.

In particular, it is noted that:

- The evidence set out must be valid and supported by evidence-based research.
- Information is strictly selected based on its relevance to the topic and publications of questionable origin and information from research involving corporate interests etc. are not included.
- Quotation marks must be used whenever information is copied or set out verbatim or paraphrased, although it is recommended that the student carries out the processing and systematic synthesising of the information himself/herself. In case a piece of information is paraphrased, the student must be absolutely certain that he/she has reproduced precisely what the researcher meant in the relevant work.
- The third person must compulsorily be used in developing the texts. Nouns should not become subjects (for example instead of the phrase "the study showed that...." it is preferable to say "it was shown by the study that....").
- In all types of research, the bibliographical review is written in the past tense.
- Both genders must be used (for example "he/she").
- Each section begins with a brief presentation of the topic to follow and ends with a summary of the information previously presented, focusing on the most important points.
- iii. The structure of the text in sections is always done based on the research question and the various specific issues, whilst each section begins with an introductory sentence and ends with a conclusion.

DISCUSSION

This section begins with a summary of the key findings, followed by comments, comparisons and interpretations of the results of the studies reviewed. In drawing conclusions, important issues that may relate to methodological problems of the research, contradictions in the findings and gaps that may have been identified, are addressed. The presentation can, again, be on a thematic basis, with regard to the main issues that require attention. It is noted that, contrary to the previous chapter where references are limited to the studies included in the review, here the discussion can extend to related matters to substantiate views, positions and conclusions, with references to the broader international and Greek bibliography, giving examples of research and other studies not included in the review. This section sets out the strengths and the limitations of the Thesis.

CONCLUSIONS

In general, the conclusions include the following:

- i. Research conclusions
- ii. Significance for the discipline
- iii. Orientation for future research, practice, dissemination of the results education, establishment of policies, clinical and other orientations
- iv. Recommendations for practical implementation
- v. Recommendations for future research.

BIBLIOGRAPHY

Bibliography forms an integral part of the Thesis. It sets out the list of bibliographical references which have been used in writing the Thesis in accordance with the referencing system of Harvard Anglia Ruskin University or of the American Psychological Association (APA – for Speech Therapy).

ANNEXES

The annexes are numbered and include items whose description is considered useful, but which should not be incorporated in the main text of the Thesis. For example, annexes set out questionnaire forms, descriptions of software programs, instructions, descriptions of complex tests, etc. The main body of the Thesis must include the proper references – where necessary – to the corresponding annexes to provide easier guidance to the reader. The annexes are always placed at the end of the Thesis. If there is more than one annex, the heading is a number or a letter or a letter and number combination (for example ANNEX IC, ANNEX ONE or ANNEX A) as well as a descriptive title. In each annex, the heading and the title must be positioned in the centre of the page and reference thereto must be made in the table of contents. Photocopied material is acceptable in the annexes, provided it is legible. All the pages of the annexes must be numbered using Arabic numerals.

SYSTEMATIC REVIEW THESIS

MAIN PART

The main part of the Thesis is typed in 1½ line spacing, Arial 12 font, in fully justified formatting. It must include the following sections:

Title (up to 20 words)

The title must be clear and concise and present the substance of the study pursued. The words "systematic review" are stated at the end.

Abstract (200-300 words)

The abstract of your Thesis must help the reader understand in a few sentences what you have studied, the reason you have studied it and the conclusions you have reached. The abstract is structured and contains the following sections: **Introduction, Purpose, Methodology, Results, Conclusions**. At the end of the abstract the keywords are stated (up to 6), offering a more general description of the topic of the Thesis. The keywords do not refer to the keywords to be used in the bibliography search.

Introduction

i. Theoretical background

The topic is presented based on international bibliography. Also, relevant definitions are briefly described, concepts are clarified and epidemiological evidence is presented (where applicable).

ii. Existing knowledge

Describe what is generally known for the topic to date from studies in the bibliography, without going into great detail and without merely listing articles. An effort must be made to group conclusions of previous studies (primary and mandatorily of reviews {if any}), referring to the corresponding articles of the researchers. (The concealment of bibliographical reviews, whether deliberate or not, is considered to be an inappropriate approach and the topic automatically becomes a bibliographical review).

iii. Description of the problem

The need to conduct a systematic review of the research bibliography on the specific topic is explained (e.g. summary of existing scientific knowledge, identification of contradictions or gaps in the bibliography, absence of guidelines).

iv. Purpose and specific objectives

The purpose and specific objectives of the systematic review are clearly stated.

v. Enhancement of existing knowledge – Added value and benefit

State why this study is important for the specific population, how it will contribute with new knowledge to the promotion of the discipline, its significance for the practice and/or theory of the discipline with special reference to the specific subject area of the Program of Studies for which the Thesis is conducted.

Methodology

In this section you will describe the method and the means you have used to achieve the purpose and objectives of your study.

i. Description of search strategy

You will describe the search strategy, in other words you will mention:

- a) All the databases in which you have searched for the articles;
- b) The keywords you have used in your search, as well as their combination.

Your search strategy must be presented in a table for all the databases (see relevant example in Table 4).

ii. <u>Study inclusion – exclusion criteria</u>

State the inclusion or exclusion criteria of a study from the review with detailed references.

iii. Final selection of studies to be included in the systematic review

State the number of studies which have been checked and verified in terms of the fulfillment of the inclusion criteria in each stage, as well as the final number of studies included in the review. It would also be appropriate to briefly justify the reasons for which the studies were excluded from the review. This information will be presented in brief in a flow chart (see example in Illustration 1).

iv. Assessment of the quality of the studies (compulsory)

The quality of the information provided by the studies included in the review is assessed. This can usually be done with the assignment of a quality score for each separate study. In this case, state the scale of the quality score used in the assessment of the studies (depending on the Program). The scale of the quality score can be based on the following information regarding the study:

- 1) Selection of the study population and sample;
- 2) Method of design of the study;

3) Participation and duration of follow-up (repeat tests for prospective studies);

- 4) Method of assessing the exposure;
- 5) Method of determining the outcome;
- 6) Adjustments during the analysis.

Use the past tense when referring to the methodology you have followed for conducting the study as well as to your results.

Results

This section includes a presentation of the results of the research studies which have been reviewed. We usually begin with a general description of the search results.

Example – The 12 epidemiological studies included in this review were conducted in several countries situated in Europe and America. More specifically, 7 studies were conducted in Europe (Germany, Spain, Netherlands, Sweden and Finland respectively) while the five remaining studies were conducted in America (USA and Canada).

In general, the results must include the following:

i. One table divided in sections (and/or more sections depending on the thematic presentation), presenting in brief and usually in chronological order, the main characteristics of the studies (e.g. year of publication and country of conduct, type of the study, population – characteristics of participants, assessment of exposure and outcome, key findings, etc.) described in detail in the text (see example in Table 5).

ii. Detailed presentation and description of the studies in the text, attempting a combination of indications from different research. This can be done after grouping research results or types of studies.

iii. The structure of the text in sections is always done based on the research question and the various specific issues, whilst each section begins with an introductory sentence and ends with a conclusion.

iv. The methodological quality of each study is assessed separately based on criteria set with the use of an assessment scale which assigns a quality score to each study. This information can be presented in brief in a table setting out the score of the methodological quality of the studies (see example in Table 6).

It must be perfectly clear which of the studies were used in previous reviews, in order to highlight the work done by the student himself/herself.

Discussion

This section begins with a summary of the key findings, followed by comments, comparisons and interpretations of the results of the studies reviewed. In drawing conclusions, important issues that may relate to methodological problems of the research, contradictions in the findings and gaps that may have been identified, are addressed. The presentation can, again, be on a thematic basis, with regard to the main issues that require attention. It is noted that, contrary to the previous chapter where references are limited to the studies included in the review, here we can extend to related matters to substantiate views, positions and conclusions, with references to the broader international and Greek bibliography, giving examples of research and other studies not included in the review. This section sets out the strengths and limitations of the Thesis.

Conclusions

In general, conclusions include the following:

- vi. Research conclusions
- vii. Significance for your discipline
- viii. Orientation for future research, practice, dissemination of the results, information, health policy, clinical orientations.

Bibliography

Bibliography forms an integral part of the Thesis. It sets out the list of bibliographical references which have been used in writing the Thesis in accordance with the referencing system of Harvard Anglia Ruskin University or of the American Psychological Association (APA – for Speech Therapy).

Table 4: Search strategy and keywords used in the identification of studies investigating the relationship between central obesity and dementia.

	Keywords	Database 1	Database 2 etc.
	1. central obes*		
Central obesity –	18. abdominal obes*		
	19. waist circumference		
	20. waist to hip ratio		
Exposure	21. waist-to-hip		
	22. waist-to-hip-ratio		
	23. WHR		
	24. Sagittal Abdominal		
	Diameter		
25. #1 OR #2 OR #3 OR #8	#4 OR #5 OR #6 OR #7 OR		
	26. Alzheimer's disease		
Dementia –	11. Alzheimer disease		
Outcome	12. vascular dementia		
	13. dementia		
14. #10 OR #11 OR #12	OR #13		
	15. cohort		
	16. prospective		
December decises of the	17. longitudinal		
study	18. follow-up		
study	19. incidence		
	20. risk		
	21. rate		
22. #15 OR #16 OR #17 #21	OR #18 OR #19 OR #20 OR		
24. #9 AND # 14 AND # 22			
Тс	otal		•



Illustration 1: Diagram illustration of the flow of results of the systematic search

Table 5 Characteristics of the studies

STUDY	COUNTRY	STUDY POPULATION NUMBER (N) GENDER (G) AGE (A) Characteristics (Char.)	TYPE OF INTERVENTION	INTERVENTION SETTING (HOSPITAL, INSTITUTION, WORKPLACE)	DURATION	EFFICACY	
						CLINICAL SYMPTOMS	NEUROPHYSIO- LOGICAL PARAMETRES
Harter, et al. (1992) Retrospective study	USA	N: 265 G: 43%M / 57%F (114F / 151A) A (median and range: 45 yrs (20-90) S:49 yrs (median) C:42 yrs (median)	Surgery (77) (95 wrists) Vs Conservative treatment with various interventions ¹ (188)	N/A	54 months	S: Yes C: Yes ²	S: Yes C: We don't know
Seror (1992) Prospective observational study	France	N: 125 wrists G: S: 76%F / 24%M C:81%F / 19%M N.T: 79%F / 21%M A (median and range) in years: S: 57,5 (30-88) C: 58,6 (28-87) N.T.: 57,6 (28-87) Char.: Duration of symptoms (months) S: 23,3 C: 22,9 N.T.: 20,9	Surgery (33 wrists) Vs 1-3 doses of steroid injections (56 wrists) Vs No treatment (N.T.) (36 wrists)	Investigation laboratory	52 months	N/A	S: Yes C: No N.T.: slow deterioration

S= Surgical intervention, C= Conservative treatment, N.T.= No treatment, N/A= Not Stated

Table 6: Methodological quality score of the studies under review *

Study		Se	lectio	า	Compara	bility		Result		Total
	1	2	3	4	5	6	7	8	9	
Anderson, Johnson & Batal, 2005	*	*	-	*	*	-	*	*	*	7
MacDorma n et al. 1997 (a)	*	*	-	*	-	*	*	*	*	7
MacDorma n et al. 1997 (b)	*	*	-	*	-	*	*	*	*	7
Malloy Hoffman & Peterson, 1992	*	*	*	*	*	*	*	*	*	9
Pollack, 2001	*	*	*	*	*	*	*	*	*	9
Schellschei dt, Oyen & Jorch, 1997	*	*	-	*	-	-	*	*	*	6

Shah, Sullivan & Carter, 2006	*	*	-	*	*	*	*	*	*	8
Wisborg et al. 2000	-	*	*	*	-	*	*	*	*	7

Notes: 1. Representative sample of exposure, 2. Selection of non-exposed, 3. Ascertainment of exposure, 4. The outcome did not exist prior to the commencement of the study, 5. Adjustment for educational level, 6. Adjustment for additional (secondary) confounding factor, 7. Assessment of exposure, 8. Adequate follow-up time, 9. Non-attrition bias.

*Other methods of assessment can also be used depending on the Program of Studies. (Vantulder, Pedro, Furlan, Jadad, etc.).

GENERAL INSTRUCTIONS ON TEXT FORMATTING

TITLES OF CHAPTERS, SUB-CHAPTERS AND SECTIONS

It is advisable not to number the chapters and sub-chapters of the Thesis, but to escalate them based on the position and the way the headings are written, in the following order:

TITLE OF CHAPTER: In bold capital letters (e.g. METHOD, RESULTS, etc.); centrally justified; followed by an empty line.

Title of Sub-chapter: Bold, Italics, to the left, one tab in (e.g. Measurement Process). The text begins on the following line.

Title of Section: To the left, one tab in, italics (e.g. Test 1). The text begins after this title (on the same line).

NUMBERING

In case you need to use numbering in the text, this will be done first by using letters, e.g. a), b) etc. If each of these "a)"s and "b)"s must be further numbered, this will be done using numbers "1)", "2)", and if within these numbers, further numbering must be inserted then use Latin numbers. i.e. "i)", "ii)".

LETTER FONT

The letter font must be legible (Arial 12) and the contrast between the ink and the paper in the final printed text must be significant in order to ensure a clear and legible printout. Also, the spacing between the letters of the words must be adequate. Similarly, line spacing must also be adequate (1.5 spacing). The main text must be written in font 12 while the footnotes must be no more than two numbers smaller than the font used in the main text and can also be single-spaced.

UNDERLININGS

To underline, use one single continuous line, which must be the same throughout the text.

PHOTOGRAPHS AND ILLUSTRATIONS

The photographs and illustrations used in the Thesis must be of satisfactory quality, but not large in size, e.g. more than 200KB each.

MARGINS

In order to avoid problems after the book-binding, all the copies and the original of the Thesis must have the following margins:

I. Left

All the margins of the Thesis, from the first to the last page, must be at least 3 (three) cm. This margin allows enough space for book-binding.

II. Right

All the right margins must be at least 2.5 (two and a half) cm.

III. Bottom

The bottom margin must be at least 2.5 (two and a half) cm.

IV. Top

The top margin must be at least 2.5 (two and a half) cm, including the following pages: Copyright, Lists of Tables, Figures, Illustrations, Photographs, Bibliography, Annexes. The only exceptions (to the 2.5 margin) are the Title Page, the Abstract, the first page of the Preface (if any), the first page of the Table of Contents and the first page of each Chapter (including the Introduction), which must begin 5 cm from the top.

PRINTING, SPACING AND INDENTS

The Thesis must be printed only on one side of each page and the main text must be fully justified on each page. The spacing must be 1½ (one and a half), except in the case of references, notes, chapter titles, sub-titles and large headings, which will be single-spaced with an empty line between the topics. Paragraph indents must have five to ten spaces throughout the Thesis. References must have a distance of at least four spaces from the left and the right margin. The indent of the first row of a separate paragraph must have a minimum distance of four spaces.

PAGINATION

Each page of the Thesis must correspond to one number. The first page on which a number will appear will be page "ii" (Copyright page). The title page is deemed to be page "I" but it has no number. Arabic numerals (1, 2, 3, etc.) are used to number the rest of the pages of the text, illustrations, annexes, notes, list of references or bibliography. Page numbers must not appear on the first page of the main text or the first page of each new chapter. Numbers containing letters, hyphens, periods or parentheses [for example 1a, 1-2, -1-, I., and (I)] are avoided. The positioning of the page numbers must be the same throughout the Thesis, including the introduction, the text, the annexes and the bibliography. Given that the text is printed on one side only, page numbers must be positioned in one of the following three ways:

- i. On the top right corner of the page, 3 (three) cm (4 lines) from the top and 2.5 (two and a half) cm from the right end.
- ii. On the bottom in the centre, 3 (three) cm (4 lines) from the bottom of the page.
- iii. As close to the positions described in i or ii as the word processor allows.

OTHER PROVISIONS

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The copyright of the Thesis belongs to the student and the Supervisor as they are the ones who have contributed to its execution. In case the material of the Thesis will be announced at a conference, the first name to appear will be that of the person giving the speech. In case the material of the Thesis is published in a journal, the author first named is the person who has the main responsibility for drafting the article and responding to any questions of the journal's editorial committee In any event, none of the copyright holders will undertake any publication activities without informing and involving his/her associate.

The student and/or the Supervisor have the obligation to assign to European University Cyprus the right to use the Theses for the purposes of the University, as well as to print and make available copies to the public on a non-profit making basis, in case copies are not available in any other way. The assignment is made with the signing of the relevant form.

BIOETHICAL ASSESSMENT OF RESEARCH THESIS

In the case of a research Thesis (clinical trials, case study, questionnaires, etc.), the student has the obligation, in collaboration with his/her Supervisor, to submit an application to the University's Committee of Ethics and Morals for guidance / advice on the further steps until the submission of the complete research proposal to the National Bioethics Committee of the Republic of Cyprus, as determined in the relevant legislation. The collection of data and the remaining experimental procedures can only begin once the official approval of the National Bioethics Committee has been obtained.

AVOIDANCE OF PLAGIARISM

Both the student and his/her Supervisor must take all necessary measures to strictly avoid plagiarism, which is a serious academic but also criminal offence. Plagiarism is defined as the reproduction of verbatim texts or the paraphrasing of sections either from papers drafted by others or from books or scientific articles, without using quotation marks and references and without mention of the authors of the primary source. The Supervisor must thoroughly check the student's Thesis for phenomena of plagiarism and in case such phenomena are observed, the student is initially referred to the Department's Committee of Undergraduate Theses which drafts a relevant report. In this case, the student fails the course and the provisions laid down in the University's statute take effect.

ANNEX



SCHOOL OF SCIENCES DEPARTMENT OF LIFE SCIENCES

THESIS

APPLICATION FOR DECLARATION OF THESIS TOPICS

NAME OF STUDENT	
REGISTRATION NO.	
PROGRAM OF STUDY	

DECLARATION OF TOPICS

1.	
TOPIC NO.	
TITLE	
2.	
TOPIC NO.	
TITLE	
3.	
TOPIC NO.	
TITLE	
4.	
TOPIC NO.	
TITLE	
5.	
TOPIC NO.	
TITLE	
Date:	Signature:
For Official Use	
Application received on:	
Decision of the Comm	ittee of Undergraduate Theses
Approval of Topic No.:	
Supervising Professor:	
Re-submission of Topic:	: Yes No



European University Cyprus

School of Sciences

Department of Life Sciences

UNDERGRADUATE THESIS

APPLICATION TO CHANGE THESIS TITLE

Student Name			
Registration Number			
Program of Study			
Current title			
Title Number			
Title			
New title			
Title Number			
Title			
lustification			
JUSTITUCATION			
(continue at back of n	ana if needed)		
Data			
Date:		Signature:	
For Departmental Us	se		
Date Application Rec	aived:		
Decision of Master	Thesis Committee		
Approval of new title r	numbered:		_
Supervisor:			
Re-submission of title	: Yes	No	


European University Cyprus

School of Sciences

Department of Life Sciences

UNDERGRADUATE THESIS

APPLICATION TO CHANGE SUPERVISOR

Student Name	
Registration Number	
Program of Study	

Current title

Title Number	
Title	
Supervisor	

Justification

(continue at back of page if needed)

Date:	Signature:
For Departmental Use	
Date Application Received:	
Approval of new title numbered: Supervisor:	
Re-submission of title: Yes	No

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WRITTEN TEXT ASSESSMENT CRITERIA

EUROPEAN UNIVERSITY CYPRUS

School of Sciences Department of Life Sciences Program of X

THESIS ASSESSMENT

Name of student:

Registration No.:

Topic of Thesis:

Chair of the Committee

Member 1 (Proposer):

Scale of Assessment of Written Study

ASSESSMENT CRITERIA			Grade*	
			Chair (40%)	Member 1 (20%)
1	Method and completeness in addressing the topic Comments:			
2	Organisation of material Comments:			
3	Documentation of information and data Comments:			
4	Originality of topic – inspiration Comments:			
5	Scientific background (correct terms and concepts) Comments:			
6	Thesis layout Comments:			
7	Language, spelling, correlation of concepts, clarity of writter language <i>Comments:</i>	n		
8	Completeness and recording of bibliography Comments:			
*Attent effected	ion: Each assessor assesses each criterion out of 100%. Normalisat d automatically using mathematical formulas.	tion is Total		
Date	12/12/2015	Grade	of written tex	t
The T	wo-member Assessment Committee F	Final grad	de of Thesis	

The two-member Assessment Committee

Chair of the Committee Signature:

Member 1 (Proposer) Signature:

ORAL PRESENTATION ASSESSMENT CRITERIA

EUROPEAN UNIVERSITY CYPRUS

School of Sciences Department of Life Sciences Program of X

THESIS ASSESSMENT

Name of student:

Registration No.:

Topic of Thesis:

Chair of the Committee Member 1 (Proposer):

Scale of Assessment of Oral Presentation of Study

ASSESSMENT CRITERIA			Grade*	
		Chair (20%)	Member 1 (20%)	
1	Method and completeness in addressing the topic Comments:			
2	Documentation of information and data Comments:			
3	Originality of topic – inspiration Comments:			
4	Knowledge and assimilation of the topic Comments:			
5	Scientific background (correct terms and concepts) Comments:			
6	Organisation of material Comments:			
7	Time management Comments:			
8	Quality of oral communication Comments:			
*Attent	ion: Each assessor assesses each criterion out of 100%. Normalisation is			
enected	Tot	al		
Date	12/12/2015 Grade of	oral presentation	n	
The Tv	wo-member Assessment Committee Final	grade of Thesis		

Chair of the Committee

Signature:

Member 1 (Proposer) Signature:



European University Cyprus

DECLARATION OF ASSIGNMENT OF THESIS RIGHTS

NAME OF STUDENT	
REGISTRATION NO.	
PROGRAM OF STUDY	
TITLE OF THESIS	

I, the aforementioned student, unreservedly declare that this Thesis is the product of my own exclusive effort and work, save where the text includes references to other authors, and that it has not been submitted elsewhere as part of any academic requirement or other purposes.

In the framework of the assessment of the Thesis, I have no objection whatsoever to the following:

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- Provision of the electronic file of the Thesis to a competent service for purposes of establishing the offence of plagiarism and the preservation of a copy in the records of the relevant service for purposes of future consideration of the offence of plagiarism.

I hereby declare that I have thoroughly studied, understood and fully complied with the internal regulations of European University Cyprus regarding Academic Ethics, Morals and Student Discipline.

Date: _____

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We hereby declare that this Undergraduate Thesis has been conducted under our supervision and guidance and relates to original work. We have no objection to the assignment of the copyright of the Undergraduate Thesis to European University Cyprus as detailed above.

Capacity of Member of the Assessment Committee	Chair	Member 1 (Supervisor)
Electronic signature		
Name		

METHODOLOGICAL APPROACH TO SYSTEMATIC REVIEWS

DEFINITION OF SYSTEMATIC REVIEW

A systematic review is defined as the process of review of the indications (exhibits) in available research bibliography in connection with a clearly formulated research question, using a systematic and well-defined methodological process. This process aims to identify, select and assess appropriate primary research studies, but also record and analyse the data of the studies to be included in the review.

STAGES LEADING TO THE COMPLETION OF A SYSTEMATIC REVIEW

i. FORMULATION OF A RESEARCH QUESTION

The most important step of a systematic review is the clear formulation of a research question regarding the relationship between the identifier to be studied and the frequency of appearance of an outcome in a given population. It is also very helpful to accurately define the method of measuring both the identifier to be studied and the outcome.

ii. ESTABLISHMENT OF THE INCLUSION AND EXCLUSION CRITERIA OF A STUDY

The establishment of the inclusion or exclusion criteria of a study is another key step in the review. These criteria may be specific, such as the type or types of studies to be researched (e.g. intervention studies, cross-sectional studies, epidemiological prospective studies, qualitative studies with the use of a standardised questionnaire), the characteristics of the participants (e.g. specific age groups), the place of conduct of the study (e.g. community, school, hospital), the types of intervention (e.g. training programme), the outcome variables, but also general, such as the language of publication (e.g. publications only in English and Greek), time frame (e.g. studies conducted over the last decade), country of origin (e.g. European or other economically developed countries). The criteria must be selected carefully so that the articles are not too general, resulting in a multitude of information, or too specific, therefore missing important research work.

iii. BIBLIOGRAPHY SEARCH

This stage defines the search strategy (where and how to look) and includes an extensive bibliography review in all relevant sources (this is mostly done in selected online bibliography reference databases) in order to find appropriate studies, whilst an analytical algorithm of the keyword combinations (and synonymous phrases) used in the search must be maintained. The main online databases where a bibliography search may be conducted are Medline, Scopus, Embase, ISI web of science, Cinahl. A search may also be conducted in records of conference abstracts, of private and state research organisations, as well as of pharmaceutical companies.

iv. SELECTION OF STUDIES

In this stage, the studies are examined and it is decided whether they satisfy the inclusion – exclusion criteria. Some studies are rejected immediately upon reading the titles and abstracts, while for some others we must first find and read the full text, before we can decide whether or not to include them. The number of studies checked and assessed for completeness of the inclusion criteria in each stage, as well as the final number of studies included in the review can be presented in a flow chart (Illustration 1). This flow chart can also justify, in brief, the reasons for which studies have been excluded from the review.

v. RECORDING OF THE MAIN CHARACTERISTICS OF THE STUDIES

The main characteristics of the studies to be included in the review are identified and briefly described in a table (e.g. Table 1). Depending on the research question, the table may include for each research the details of the researchers, the year of publication, the size of the sample and its characteristics (e.g. age and gender), the type and methodology of the study, the type of intervention, the type of exposure and outcome, the key findings, etc. In case of missing data in some studies, an effort is made to contact the researchers in order to try and obtain the relevant information.

vi. ASSESSMENT OF THE METHODOLOGICAL QUALITY OF THE STUDIES

This process includes the assessment of the methodological quality of each separate study based on set criteria which depend on the type of the study included in the review (e.g. for randomised controlled studies some of these criteria may be the random allocation of treatment measures, the concealment of allocation, the blinding of participants, whilst for cohort studies criteria may include the ascertainment of exposure, the representativeness of the exposed cohort, the adequacy of follow-up cohorts, etc. The criteria are usually set out in a list, stating which of them are satisfied in each study. This information can be briefly presented in a table such as Table 2, which shows the results of the assessment of the methodological quality of randomised controlled studies.

vii. SUMMARY OF THE INDICATIONS (EXHIBITS) AND INTERPRETATION OF THE RESULTS

This stage includes the analysis and interpretation of the results of the studies to be included in the review, whilst where data allows this, it is appropriate to use methods of statistical synthesis of the results (meta-analysis). Otherwise, the synthesis of the results can be done in a narrative (descriptive) manner.

viii. CONCLUSIONS ARISING FROM THE SYSTEMATIC REVIEW

The interpretation of the results of the studies included in the review leads to conclusions which may include recommendations and suggestions for future research and/or public health policies, clinical practice, etc.



Illustration 1: Illustration of the results of the search strategy (Source – Patelarou, E., Brokalaki, H. (2010). Methodology of systematic review and meta-analysis. Nosileftiki, 49(2): 122-130)

Table 1: Summary of the main characteristics of the studies assessing the efficacy of smoking cessation interventions in patients with coronary disease (Source – Tziallas, D., Kastanioti, A., Skapinakis, P. (2009). Systematic review of smoking cessation interventions in patients with coronary disease, Nosileftiki, 48(1): 30-36)

Study	Country	Study population	Type of intervention	Intervention setting	Duration	Efficacy %
Quist- Paulsen P et al.	Norway	240 smokers <76 years old	Advice and written material. Follow-up for five months.	Hospital and community	5 months	57% after the first year
Reid R et al.	Canada	254 smokers	Mixed (nicotine patches and brief instructions).	Hospital and community	3 months	53% (at 3 months, 39% (in the first year)
Murchie P et al.	England	1,343 patients <80 years old	Advice and check of: blood pressure – hyperlipidaemia – nutrition – medication Intervention provided by nurses.	Community	12 months	No statistically significant difference observed between the two methods of intervention
Bolman C et al.	Denmark	789 patients	Advice provided by nurse.	Hospital and community	12 months	No statistically significant difference observed between the two methods of intervention
Hajek P et al.	England	540 patients - Smokers	20-30 min. counselling intervention by nurses – contact with other people with the same motive.	Hospital and community	Duration of treatment	No statistically significant difference observed between the two methods of intervention
Feeney GF et al.	Australia	198 patients - Smokers	Two different intervention programs.	Hospital and community	Duration of treatment	39% after one year

Table 2: Assessment of the quality of randomised controlled trials using five criteria (Source – Devereaux et al. (2005). How strong is the evidence for the use of perioperative beta blockers in non-cardiac surgery? Systematic review and meta-analysis of randomized controlled trials, BMJ, 331: 313-321)

Trials	Concealment of randomisation in the allocation of treatment measures	Short duration of conduct of the trial	Concealment of treatment measures from patients	Concealment of treatment measures from healthcare providers	Concealment of treatment measures from the assessors of the outcome
Liu	No	No	Yes	Yes	Yes
Stone	Yes	No	No	Yes	Yes
Polderman	Yes	Yes	No	No	Yes
Zaugg	Yes	No	No	No	Yes
Urban	Yes	Yes	No	No, with the exception of the anesthesiologists	Yes

European University Cyprus

INTERNAL REGULATION ON

RESIT FINAL EXAMINATION POLICY AT EUROPEAN UNIVERSITY CYPRUS

62nd Senate Decision: 28 January 2019
71st Senate Decision: 7 February 2020
81st Senate Decision: 2 March 2021

This document describes the policy of European University Cyprus (EUC) on the resit of the final examination. 'A Resit of the Final Examination' is defined as the right of a student who meets the criteria presented below, to resit once (and only once) the Final Exam of a given course that s/he has failed. The policy applies to all EUC programs of study (conventional and distance learning, undergraduate and graduate programs) with the exception of doctoral programs of study. The Resit Final Examination Policy does not replace or abolish any existing policy of EUC included in the University Charter (e.g. the Incomplete Grade Policy¹, etc.)

The Resit Final Examination is carried out as follows:

For Conventional Programs of Study/Courses, it takes place **once** per academic year prior to the onset of the new academic year as defined by the academic calendar and it applies only to courses in which the student failed during the Fall Semester and/or the Spring Semester of the <u>preceding academic year</u>.

For Distance Education Programs of Study/Courses, it is offered during **the three examination periods** of the Distance Learning Programs of Study (i.e., end of Fall Semester, end of Spring Semester and end of Summer Session) and it will apply only to the courses in which the student failed during <u>the immediately preceding semester</u>.

¹ In the event that a student has or/and declares impediment to participate in the final examination on justified grounds (as provided by the Charter of the University), he/she has to inform in written the course instructor and the Program coordinator <u>before</u> the date of the final exam. The course instructor and the Program coordinator have the authority to approve or reject the student's request. If the request is approved, then the relevant procedures of the EUC Charter are followed (for Distance Learning programs of study, the student will sit the final exam of the <u>following</u> examination period, <u>without being</u> entitled to a Final Exam Resit).

The material of the course for which the student should be assessed during the Resit Final Examination and for which the instructor of the specific course will prepare a Resit Final Examination, corresponds to that previously specified for the initial final examination in the Course Outline of the specific course. A student is allowed only ONCE to take a Resit Final Examination of a course s/he has failed and this must be done during the immediately next Resit Final Examination period and <u>only on the announced date</u>. The Resit Final Examination is a student's right and not an obligation (i.e. any student who meets the criteria presented below, but does not wish to participate in a Resit Final Examination, is not obliged to do so).

A student is eligible for a Resit Final Examination when s/he:

- 1. Has failed a course (i.e. has received an F grade in a course)
- 2. Has received a total grade in the range of 50-59 (for undergraduate courses) or 60-69 (for masters courses).
- 3. Has no outstanding "I" in the other course components of the specific course (i.e. midterm, assignments) by the time of applying for a Resit Final Examination.
- 4. Has submitted a written application to the Department of Enrollment (along with the participation fee of 75 euro per course-in the case of Conventional Programs of Study/courses), after he/she has been informed for his/her eligibility for a Resit Final Examination by the Department of Enrollment after the official announcement of the grades related to the respective semester.

A student who does not meet the above Resit Final Examination eligibility criteria will need to re-register for the failed course.

In order for a student to successfully pass the failed course by taking a Resit Final Examination, the following must apply:

- 1. The student takes the Resit Final Examination on the specified date. Failure to participate in the Resit Final Examination on the specified date implies the student's disqualification from participating in a Resit Final Examination of the specific course on any other date or on any of the following Resit Final Examination specified dates.
- 2. The student scores in the Resit Final Examination the mark of 60% (or more) for an undergraduate course and 70% (or more) for a masters' course and for courses of the two following undergraduate programs of study: Doctor of Medicine (M.D.) and Bachelor of Dental Surgery (B.D.S.). Regardless of the result of the Resit Final Examination, the maximum final grade that a student may receive for the specific course is the grade of D for undergraduate courses and the grade of C for masters' courses and courses of the Doctor of Medicine (M.D.) and Bachelor of Dental Surgery (B.D.S.) programs of study.



Πολιτική Επαναληπτικής Τελικής Εξέτασης

Ευρωπαϊκού Πανεπιστημίου Κύπρου

Το πιο κάτω κείμενο παρουσιάζει την πολιτική του Ευρωπαϊκού Πανεπιστημίου Κύπρου (ΕΠΚ) αναφορικά με την Επαναληπτική Τελική Εξέταση. Η Επαναληπτική Τελική Εξέταση ορίζεται ως το δικαίωμα του/της φοιτητή/τριας να επαναλάβει μία φορά (και μόνο) την Τελική Εξέταση ενός μαθήματος στο οποίο έχει αποτύχει, νοουμένου ότι πληροί τα κριτήρια που παρουσιάζονται πιο κάτω. Η πολιτική ισχύει για όλα τα προγράμματα σπουδών του ΕΠΚ (Συμβατικά και Εξ' Αποστάσεως, προπτυχιακά και μεταπτυχιακά προγράμματα), με εξαίρεση τα διδακτορικά προγράμματα σπουδών. Η πολιτική της Επαναληπτικής Τελικής Εξέτασης δεν αντικαθιστά ή καταργεί οποιαδήποτε υφιστάμενη πολιτική του ΕΠΚ που αναφέρεται στον καταστατικό χάρτη του Πανεπιστημίου (π.χ. Πολιτική Ελλείποντος Βαθμού/Incomplete Grade Policy², κτλ.)

Η Επαναληπτική Τελική Εξέταση πραγματοποιείται ως εξής:

Για Συμβατικά Προγράμματα Σπουδών/μαθήματα, αυτή λαμβάνει χώρα μία φορά έκαστο ακαδημαϊκό έτος, αρχές Σεπτεμβρίου και ισχύει μόνο για μαθήματα στα οποία ο/η φοιτητής/τρια απέτυχε κατά το Φθινοπωρινό Εξάμηνο ή/και το Εαρινό Εξάμηνο του ακαδημαϊκού έτους που προηγήθηκε.

Για Εξ' Αποστάσεως Προγράμματα Σπουδών/μαθήματα, προσφέρεται κατά τις τρεις εξεταστικές περιόδους των Εξ' Αποστάσεως Προγραμμάτων Σπουδών (δηλ. στο τέλος του Φθινοπωρινού Εξαμήνου, στο τέλος του Εαρινού Εξαμήνου & στο τέλος της Θερινής Περιόδου Διδασκαλιών) και θα ισχύει μόνο για μαθήματα στα οποία ο/η φοιτητής/τρια απέτυχε κατά το αμέσως προηγούμενο εξάμηνο.

Η ύλη του μαθήματος στο οποίο πρέπει να αξιολογηθεί ο/η φοιτητής/τρια κατά την Επαναληπτική Τελική Εξέταση και για την οποία θα ετοιμαστεί από τον/τη διδάσκοντα/ουσα του συγκεκριμένου μαθήματος γραπτό για Επαναληπτική Τελική Εξέταση, αντιστοιχεί σε αυτήν που υποδεικνύεται στο Διάγραμμα Μαθήματος του συγκεκριμένου μαθήματος και ορίστηκε για την αρχική τελική εξέταση του μαθήματος. Ο/η φοιτητής/τρια επιτρέπεται MONO MIA ΦΟΡΑ να παρακαθίσει σε Επαναληπτική Τελική

² Σε περίπτωση που φοιτητής/τρια παρουσιάζει ή/και δηλώνει κώλυμα συμμετοχής στην τελική εξέταση για αιτιολογημένους λόγους (όπως προβλέπει ο Καταστατικός Χάρτης του Πανεπιστημίου), οφείλει να ενημερώσει ηλεκτρονικά και <u>πριν</u> την ημερομηνία της τελικής εξέτασης τον/τη διδάσκοντα/ουσα του μαθήματος, καθώς επίσης και τον/τη συντονιστή/τρια του Προγράμματος, στους/τις οποίες επαφίεται η έγκριση ή όχι του αιτήματος. Στην περίπτωση αποδοχής του αιτήματος, ακολουθούνται οι σχετικές διαδικασίες όπως περιγράφονται στον Καταστατικό Χάρτη του Πανεπιστημίου) (για τα εξ αποστάσεως προγράμματα σπουδών, ο/η φοιτητής/τρια παρακάθεται την τελική εξέτασης στην <u>αμέσως επόμενη</u> εξεταστική περίοδο, <u>χωρίς</u> όμως το δικαίωμα της Επαναληπτικής Τελικής Εξέτασης).

Εξέταση του μαθήματος στο οποίο απέτυχε, και αυτό πρέπει να γίνει στην αμέσως επόμενη Επαναληπτική Τελική Εξέταση και μόνο κατά την ανακοινωθείσα ημερομηνία.

Η Επαναληπτική Τελική Εξέταση θεωρείται δικαίωμα και όχι υποχρέωση του/της φοιτητή/τριας (δηλ. σε περίπτωση που ο/η φοιτητής/τρια πληροί τα κριτήρια που παρουσιάζονται παρακάτω αλλά δεν επιθυμεί να συμμετάσχει σε Επαναληπτική Τελική Εξέταση, δεν είναι υποχρεωμένος/η να το πράξει).

Ο/η φοιτητής/τρια δύναται να παρακαθίσει σε Επαναληπτική Τελική Εξέταση, εφόσον:

- 1. Έχει αποτύχει σε μάθημα (δηλαδή έχει λάβει βαθμό *F* σε ένα μάθημα)
- Έχει λάβει στο μάθημα συνολική βαθμολογία μεταξύ 50-59 (σε προπτυχιακά μαθήματα) ή 60-69 (σε μαθήματα επιπέδου μάστερ)
- Δεν έχει εκκρεμότητες τύπου «Ι» (Ελλιπής Βαθμός/Incomplete Grade) στα υπόλοιπα συμπληρωματικά μέρη του εν λόγω μαθήματος (δηλ. Ενδιάμεση Εξέταση, Εργασίες) κατά τη χρονική περίοδο υποβολής της αίτησης για συμμετοχή στην Επαναληπτική Τελική Εξέταση.
- 4. Έχει υποβάλει γραπτή αίτηση στο Τμήμα Εγγραφών (μαζί με το τέλος συμμετοχής των 75 ευρώ ανά μάθημα-στην περίπτωση των Συμβατικών Προγραμμάτων Σπουδών/μαθημάτων) στις προκαθορισμένες ημερομηνίες, και αφού ενημερωθεί από το Τμήμα Εγγραφών για τη δυνατότητά του/της να παρακαθίσει σε Επαναληπτική Τελική Εξέταση μετά την επίσημη ανακοίνωση των βαθμολογιών που αφορούν στο αντίστοιχο εξάμηνο.

Ο/η φοιτητής/τρια που δεν πληροί τα παραπάνω κριτήρια για συμμετοχή στην Επαναληπτική Τελική Εξέταση θα χρειαστεί να επανεγγραφεί στο μάθημα που έχει αποτύχει.

Προκειμένου ο/η φοιτητής/τρια να επιτύχει στην Επαναληπτική Τελική Εξέταση μαθήματος στο οποίο έχει αποτύχει, πρέπει να ισχύουν τα ακόλουθα:

- Ο/Η φοιτητής/τρια παρακάθεται στην Επαναληπτική Τελική Εξέταση κατά την καθορισμένη ημερομηνία. Η μη συμμετοχή <u>στην καθορισμένη ημερομηνία</u> της Επαναληπτικής Τελικής Εξέτασης συνεπάγεται την αφαίρεση του δικαιώματος του/της φοιτητή/τριας για συμμετοχή σε Επαναληπτική Τελική Εξέταση του συγκεκριμένου μαθήματος σε άλλη ημερομηνία ή σε οποιαδήποτε από τις επόμενες καθορισμένες ημερομηνίες Επαναληπτικής Τελικής Εξέτασης.
- 2. Ο/Η φοιτητής/τρια συγκεντρώνει, στην Επαναληπτική Τελική Εξέταση, βαθμό τουλάχιστον 60% σε προπτυχιακό μάθημα και τουλάχιστον 70% σε μάθημα επιπέδου μάστερ και μάθημα των ακόλουθων δύο προπτυχιακών προγραμμάτων σπουδών: Doctor of Medicine (M.D.) και Bachelor of Dental Surgery (B.D.S.). Ανεξάρτητα από το αποτέλεσμα της Επαναληπτικής Τελικής Εξέτασης, ο μέγιστος τελικός βαθμός που δύναται να λάβει ο/η φοιτητής/τρια για το εν λόγω μάθημα είναι ο βαθμός D σε περίπτωση προπτυχιακού μαθήματος και ο βαθμός C σε περίπτωση μαθήματος επιπέδου μάστερ και μαθήματος των δύο προπτυχιακών προγραμμάτων σπουδών