

UNIVERSITY OF WEST ATTICA

Department Industrial Design and Production Engineering

SUBJECT : Regulations for the Postgraduate Studies Programme entitled "Circular Economy and Sustainability Strategies" of the Department of Industrial Design and Production Engineering, School of Engineering, University of West Attica.

ARTICLE 1

GENERAL PRINCIPLES

The second cycle of studies consists of attending a Postgraduate Studies Programme (P.M.S.) and is completed with the award of the Diploma of Postgraduate Studies (D.M.S.) as defined in paragraph 1 of article 30 of Law 4485/2017.

1.1 Dispatch of Postgraduate Study Programmes

The postgraduate programmes of the University of West Attica (PADA) lead to the acquisition of a Master's degree, which are academic titles of high level. Through systematic study, development, critical thinking and research, they seek to produce new knowledge and promote research and innovation.

1.2 Objectives of the Postgraduate Studies Programmes

The University of West Attica organises postgraduate programmes which aim, in accordance with par. 1 article 30 of Law 4485/2017:

- to further the advancement of knowledge, the development of research, and the satisfaction of the educational, research, social, cultural and developmental needs of the country,
- the high-level specialisation of graduates in theoretical and applied areas of specific disciplines, specific subject areas or
- individual branches of the cognitive subjects of the first branch of study of the relevant Departments.

ARTICLE 2

ESTABLISHMENT OF POSTGRADUATE PROGRAMMES

The University of West Attica establishes, organizes and operates postgraduate programmes and awards Master's degrees in accordance with the provisions of Law 4485/17 (A'114) "Organization and operation of higher education, regulations for research and other provisions", as applicable.

2.1 Procedure for the establishment of a new MSc

The legal framework for the establishment of an MSc is described in article 32 of Law 4485/2017.

2.1 Regulation of Postgraduate Studies

The Postgraduate Studies Regulation of each MSc is drawn up by decision of the Assembly of the Department, approved by the Senate, published in the Government Gazette, posted on the Department's website and notified to the Ministry of Education, Research and Religious Affairs (par.1 article 45 of Law 4485/2017). The same procedure applies in cases of amendment of the Regulation.

The present Regulation presents the structure and the rules of operation of the MSc entitled "Circular Economy and Sustainability Strategies", of the Department of Industrial Design and Production Engineering of the University of West Attica, which awards a Master's degree. Its provisions specify and complement the legal framework governing postgraduate studies and specifically the provisions of Law 4485/2017.

In particular, the Regulations of the MSc define all the issues mentioned in paragraph 1 of article 45 of the aforementioned law. Each candidate, who is selected to study in the MSc, should take note of this Regulation in due time and accept the rules of operation of the MSc.

This Regulations are posted on the website of the Department of Industrial Design and Production.

ARTICLE 3 PURPOSE - OBJECTIVES OF THE MSc

3.1 Purpose

The above mentioned Postgraduate Studies Programme (MSc) of the Department of Industrial Design and Production Engineering of the University of West Attica aims to provide participants with the concepts and frameworks of the circular economy, followed by providing practical perspectives on how they actually operate within businesses and their industrial value chains. The programme further reflects on circular design and business model approaches and how these are applied and scaled across different industrial sectors along different parts of the value chain. In particular, the ultimate aim of the programme is for graduates to be able to:

- understand the trends and drivers of the circular economy, how it can be designed and applied to industrial value chains to reduce environmental and social challenges and how they contribute to the Sustainable Development Goals (SDGs)
- understand the key terms of the circular economy in general and related to value chains and business models in particular
- understand the different circular economy frameworks and tools
- analyse the challenges with the adoption of the circular economy and in relation to understand the main drivers such as technology, collaboration, design
- describe different metrics and indicators in the context of the circular economy

develop expertise centred on the circular economy in certain industrial chains.

3.2 Objectives

The specific objectives of the programme are to strengthen the theoretical and practical background in the modern methodologies of the Circular Economy and Sustainability, deepen knowledge and further enhance skills in these areas. At the same time, to provide the necessary basis for the preparation of a doctoral thesis immediately after the completion of the MSc.

The objectives of the programme are to offer graduates:

• advanced knowledge of the necessity and benefits of the circular economy, with particular

emphasis on their energy planning and management.

- understanding of the use and appreciation of the limitations of computational analysis and design tools for developing circular economy models.
- improve skills such as critical analysis, problem solving, project management, decision making, team leadership and communication through verbal, visual and/or written means.
- specialised knowledge, scientific and technical expertise and research skills for further research and/or application in the design of efficient sustainable systems strategies.

ARTICLE 4

POSTGRADUATE TITLE OF STUDIES

The MSc in Industrial Design and Production Engineering of the Department of Industrial Design and Production of UNIWA awards a MSc in "Circular Economy and Sustainability Strategies". The title in Greek is "Circular Economy and Sustainability Strategies".

ARTICLE 5

STRUCTURE AND ORGANS OF THE MSc

The administrative bodies of the MSc as provided by the Law 4485/2017 (Government Gazette A. 114/4-8-2017) are:

- 1. The Senate of the University of West Attica, as per Regulation (EC) No. 4485/2015 (1).
- 2. The Postgraduate Studies Committee of the University of West Attica (PMS)
- 3. The Assembly of the Department (S.T.)
- 4. The Coordinating Committee (CC) of the MSc.
- 5. The Director of the MSc.
- 6. Evaluation and Selection Committee for Postgraduate Students (E.A.E.Y.)
- 7. Member Scientific Advisory Committee (SAC)

5.1 The Faculty Senate

The Senate of the University of West Attica is the competent body for the academic, administrative, organisational and financial issues of the MSc.The Senate also exercises those responsibilities related to the MSc that are not specifically assigned by the institutional framework

to other bodies.

5.1 The Postgraduate Studies Committee (PSC) of PADA.

The Postgraduate Studies Committee consists of the Vice-Rector for Academic Affairs, who acts as the Chairperson, and the Deans of the respective Institution, as Members. The members of the Committee shall not be remunerated for their participation in the Committee. The N.M.S. shall examine the proposals for the establishment of new P.M.S. in accordance with par. 5, article 32 of Law 4485/2017.

5.2 The Departmental Assembly (DA)

The Assembly of the Department of Industrial Design and Production Engineering is responsible for the following:

1. recommends to the Senate through the Postgraduate Studies Committee for the (1) Recommends the necessity of establishing a Master's degree in accordance with article 32 of Law 4485/17.

2. appoints the Members of the Coordination Committee.

3. approves the recommendations and proposals of the Coordinating Committee regarding the operation of the MSc.

4. allocates the teaching work among the lecturers of the MSc.

5. establishes selection/examination committees for postgraduate students.

6. ascertains the successful completion of the course of study for the award of the D.M.S.

7. execute all other powers provided for by the provisions of Law 4485/2017.

5.2 The Coordinating Committee (CC) of the MSc.

The Coordinating Committee of the MSc is responsible for the monitoring and coordination of the programme. The Committee is composed of five (5) members of the faculty, including the Director of the MSc. The members of the Committee are appointed by the Board of Directors for a two-year renewable term of office, at the end of which a report on the research and educational work of the MSc, as well as on its other activities, is drawn up under the responsibility of the Director. The term of office of the President of the SC may be renewed once. The President of the Board has

at the same time the role of the Director of the MSc. The SC is responsible for the monitoring and coordination of the operation of the programme; and

-may recommend to the Assembly the distribution of teaching work between the

-the teaching staff of the MSc and the reform of the curriculum

-appoint the supervisor and the members of the three-member committee for the examination of theses (Article 34(4) of Law 4485/17)

-may examine student issues such as applications for suspension of studies, part-time studies, prolongation of studies, deletion of students and makes recommendations to the Board of Directors.

5.3 The Director of the MSc and his/her Deputy

The Director of the MSc is a member of the faculty of the first grade or of the rank of Associate Professor, of the same or related subject matter as the subject matter of the MSc.In addition, he/she is a member and the President of the Board of Directors.He/she is appointed together with his/her Deputy, by decision of the Board of Directors for a two-year term of office. The Director of the MSc recommends to the competent bodies of the Foundation on any matter concerning the effective operation of the programme. The Director may not have more than two (2) consecutive terms of office. He/she shall have the following responsibilities:

1. Convene a meeting of the SC.

2. Prepares the agenda of these meetings, taking into account the recommendations of the members and bodies of the MSc.

3. Set elections to replace committee members due to vacancy.

4. Shall be responsible for the preparation of the Program budget and report, which shall be submitted to the Assembly for approval.

5. Shall be responsible for monitoring the implementation of the budget and for issuing payment orders for the expenditure concerned.

6. Under the responsibility of the outgoing Director, after the expiry of the term of the Board, a detailed report of the research and educational work of the MSc, as well as of its other activities, is drawn up, aiming at the upgrading of studies, the better utilization of human resources, the optimization of existing infrastructure and the socially beneficial use of the available resources of the MSc.The report is submitted to the relevant Department to which the MSc belongs (article 44

of Law 4485/17).

7. The Director of the MSc, as the Scientific Responsible of the respective project, issues.

and signs the payment orders for the relevant expenditure and co-signs the project contracts, in accordance with the approved budget. In addition, as Scientific Officer, he/she shall be responsible for the proper implementation and certification of the

The Scientific Supervisor shall be responsible for the proper implementation and certification of the physical object of the MSc and the feasibility of the costs associated with its implementation and shall monitor its financial object. The Deputy Director of the MSc shall be a Professor or Associate Professor and shall perform the duties of the Director in his/her absence.

5.4 Candidate Evaluation/Selection Committee for Postgraduate Students (article 31, paragraph 3d of Law 4485/2017)

The Candidate Evaluation and Selection Committee is composed of 3 members of the Department of Industrial Design and Production Engineering. The work of the Committee consists of the following:

1. Evaluation of all submitted supporting documents, in accordance with the applicable legislation and the academic criteria that may have been set according to paragraph 2 of article 34 of Law 4485/17.

- 2. Conducting written language proficiency examinations for admission to the MSc (where required)
- Conducting personal interviews with candidates who have either submitted to the Secretariat of the MSc a language certificate or have successfully passed the written examinations of the MSc in English.

The final ranking of the Candidates based on the list of criteria of the Programme and the proposal for the selection of Candidates based on this ranking are submitted to the SC for validation.

The Board may establish additional Committees where it deems necessary. All proposals or decisions of the Committees shall be approved by the Board.

5.5 Six-member Scientific Advisory Committee (Article 44, paragraph 3 of Law 4485/2017)

The Six-member Scientific Advisory Committee is responsible for the external academic evaluation of the M.Sc. The five (5) members of the Scientific Advisory Committee are members of the first grade, associate and assistant professors of other universities or researchers from

research centers of article 13 A of Law 4310/2014, as amended and in force, who have the qualifications provided for visiting lecturers in paragraph 5 of article 36, of the respective scientific field, and provided that they do not serve as lecturers in a MSc of the School.

The sixth member shall be a postgraduate student of the School.

The term of office of the members shall be five years, renewable, except for the student, whose term of office shall be one year.

The status of the President of the Committee, the method of selection of the postgraduate student, as well as any specific issue concerning the constitution, operation and administrative support of the Committee, shall be determined by a decision of the Senate published in the Government Gazette.

The Board may establish additional Committees where it deems necessary. All proposals or decisions of the Committees shall be approved by the Board.

5.6 Administrative Support of the MSc.

The MSc "Circular Economy and Sustainability Strategies" is supported by the Programme Secretariat located at the PADA. The Secretariat of the MSc may be composed of members of the Administrative Staff of the PADA, members of the Faculty's HQ and members of the Department's HQ or following an open call for applications, where required, and has the task of providing secretarial support to the MSc, such as preparing the admission procedure for candidates, keeping the financial records of the Programme, secretarial support to the Board, registration of marks, etc.

ARTICLE 6

CATEGORIES AND NUMBER OF APPLICANTS

6.1 Categories of Applicants

The MSc is open, after selection, to holders of a first cycle degree from the Departments of Universities or TEI of the Greek or foreign countries, or similar foreign institutions recognized by the IOATAP, who aim to acquire high theoretical training and expertise, in order to fully meet the needs of the market and research for the transition to the circular economy and tax strategies.

6.2 Number of admissions

The maximum number of admission to the programme per year is twenty-five (25). In case the number of candidates is less than 50%, i.e. less than "13", the Assembly of the Department of Industrial Design and Production Engineering recommends to the Senate the approval for the operation of the postgraduate programme, following a recommendation of the S. In the case of a tie, the number of admissible postgraduate students shall be increased in order to admit the last tied candidate.

In addition to the number of admission, members of the categories of SNEs, HPEs and STPs shall be admitted as supernumerary scholarship holders, in accordance with par. 8 of Art. 34 of Law 4485/2017.

ARTICLE 7 METHOD OF INTRODUCTION

Students are selected in accordance with Law 4485/2017 and the provisions of these Regulations for Postgraduate Studies. Each academic year, by decision of the Board of Directors, a notice for the admission of postgraduate students to the MSc is published and posted on the website of the Department and the Foundation. The relevant applications together with the necessary supporting documents are submitted to the Secretariat of the Department, within a deadline set in the announcement and may be extended by decision of the Board of Trustees. Candidates are informed by the call for expressions of interest (announcement) of the MSc, which is published at least one month before the deadline for submission of applications, about the necessary supporting documents, the application procedure and the deadline for submission of applications.

7.1 Call for applications

The call for expressions of interest for the submission of applications for the MSc is announced during the spring semester. The relevant notice is posted on the website of the MSc and published through the websites of the PADA.

The call for applications shall specify:

 α) The conditions for the participation of postgraduate students in the procedure selection

process

b) The necessary supporting documents to be submitted

(c) The deadlines for submission of the supporting documents and the way in which they are to be submitted

(d) The selection procedure and the selection criteria for postgraduate students

(e) any other detail deemed necessary to facilitate the selection process of the postgraduate candidates

Necessary documents are:

1. Application for nomination

2. One (1) photo of a photo ID

3. Curriculum vitae

4. English language certificate, at least B2 level

5. Copy of a degree/diploma of a Greek higher education institution or a copy of a degree of a similar institution abroad, recognized by the Δ .O.A.T.A. Π . or a Certificate of Completion of Studies.

6. Certificate of analytical grades of undergraduate courses, including the grade of the degree/diploma

7. Letter of Intention to study, up to one (1) page (up to 500 words), in which the candidate explains the reasons why he/she wishes to follow the MSc."

8. Two letters of recommendation in a sealed envelope

9. Copy of thesis/dissertation (if submitted)

10. Publications in scientific journals and/or conferences (if any)

11. Evidence of relevant professional and/or research activity (if any)

12. Photocopy of two sides of the identity card

The level of proficiency in the foreign language is demonstrated in the following ways:

 α) A. Article 19 of Article 13 of Law 3149/2003.

b) Diploma of Foreign Language and Literature or Diploma of Foreign Languages Translation and Interpreting of the domestic language or equivalent and equivalent of foreign language schools.

(c) Bachelor's, undergraduate or postgraduate diploma or doctoral degree of any

d) A diploma equivalent to that of Greek secondary schools, provided that it has been obtained after at least six years of regular study abroad.

Candidates who do not have a certificate of proficiency in English at least at B2 level may sit a written test in English. The successful candidates in the written English language test and those who have submitted a certificate of English language proficiency will be invited to an oral interview, which is the final stage in the assessment of candidates.

Students from foreign institutions must submit a certificate of equivalence and equivalence from the Δ .O.A.T.A. Π ., according to article 34, par. 7 of Law 4485/17. In any case, according to Article 34, par. 7 of Law 4485/17, a postgraduate diploma cannot be awarded to a student whose first cycle degree from a foreign institution has not been recognised by the Δ .O.A.T.A. Π In any case, in accordance with Article 34.7 of Law 4485/17, a postgraduate diploma cannot be awarded to be awarded to a student be awarded to a student whose first cycle degree from a foreign institution has not been recognised by the Δ .O.A.T.A. Π In any case, in accordance with Article 34.7 of Law 4485/17, a postgraduate diploma cannot be awarded to a student whose first cycle degree from a foreign institution has not been recognised by the Δ .O.A.T.A. Π

7.2 Participation requirements for student candidates

The Secretariat of the MSc receives the applications and the necessary supporting documents submitted by the postgraduate candidates, which are provided by the notice and prepares a list of postgraduate candidates, which is forwarded to the E.A.E.Y. The supporting documents submitted by the candidates must have been submitted in time, as provided in the relevant notice. Late applications will not be accepted.

There are two stages in the evaluation process:

In the first stage, applications are evaluated on the basis of the completeness and validity of the required supporting documents submitted. The completeness and validity of the required supporting documents is a prerequisite for qualification to the next stage.

During the second stage of the procedure, candidates are invited to an interview before the EACC. During the oral interview, the committee will assess the candidate's personality and evaluate his/her scientific background, any previous research and professional work and critical faculties.

On completion of the evaluation procedures, the competent N.A.E.Y. will draw up the list of successful and unsuccessful candidates, in order of ranking, according to the selection criteria and the weighting coefficients per criterion. Successful candidates are those who have obtained a ranking in the order of merit up to the maximum number of students admitted. The selection board may consider as successful those candidates who are tied with the last successful candidate. Candidates who have obtained a ranking in the ranking order above the maximum admission threshold are considered runners-up, with the right to register if the top-ranked candidates do not accept the place or do not register in time.

In addition, students who carry out their internship under the following conditions have the right to participate:

A. Have fulfilled all other degree taking requirements and completion of their internship is the sole and only outstanding requirement.

B. The internship must be completed by the first ten days of October.

Candidates in this category must submit, together with the above documents, a certificate from the secretariat of the department to which they belong, certifying that they meet the requirements A and B.

Graduates may also apply provided that they have submitted a graduation certificate or a certificate of graduation at the start of the course.

Selection of postgraduate students is based on the following criteria:

CRITERIA		Weight
K1	Degree level, marks in relevant courses	20%
К2	Relevant research and/or professional activity	20%
КЗ	Letters of recommendation	20%
K4	Verbal interview	40%
	TOTAL	100%

For each of the above criteria (K1-K4), you will be marked on a scale of 0-10. The calculation of each candidate's final mark (TA) is based on the above criteria and their respective weightings as follows:

TB= (K1x 0,20) + (K2 x0,20) + (K3 x0,20) + (K4 x 0, 40)

Based on the overall criteria, the E.A.E.Y. prepares the Student Evaluation Table and submits it to the Board of Trustees for approval. The final list of the successful and runners-up is approved and validated by the Board of Trustees and posted on the Department's website by the end of September. When publishing the results, special care is taken to protect the personal data of the candidates. Once the above list has been validated by the Board, the registration periods and the methods of payment of the tuition fees (in instalments) are announced.

The successful and runners-up are informed about their enrolment in the MSc at specified intervals, determined by the Board. Those who do not enrol on time lose the right to enrol in the MSc, unless they invoke reasons of force majeure or serious illness. In this case, the Board shall consider the reasons invoked by the candidates and decide on them.

In case of non-enrolment of one or more students, the runners-up, if any, will be invited, in order of their ranking in the approved evaluation list, to enrol in the Programme. The substitution procedure may be applied as many times as necessary to complete the required number of candidates in accordance with the regulations of this MSc.

Substitution of places is allowed up to one day before the start of the course of the MSc. Any subsequent substitution may be accepted only after the agreement of the Board.

Postgraduate students must register within 15 days of the announcement of the selection of the successful candidates. When registering, postgraduate students must submit the following documents in addition to those submitted with their application:

-a declaration of personal data

-a certificate of registration in the municipal registers or a photocopy of their identity card or passport

-Certificate of permanent residence and proof of permanent residence and proof of civil status -A declaration (Law 1599/1986) stating that they are not attending another MSc.

-Copy of the proof of deposit of the first instalment of the tuition fees to the account of the MSc (with the exception of those mentioned in article 35, paragraph 2 of Law 4485/2017).

For reasons of exceptional need, a postgraduate student may be registered after the expiry of the above deadline, by decision of the Board of the MSc, following a reasoned request of the interested party.

ARTICLE 8

DURATION OF STUDY

The duration of study in the MSc leading to the award of a Master's degree is defined as three (3) academic semesters, which includes the time for the preparation of the thesis.

The duration for the successful completion of the studies is set at a total of six (6) academic semesters. In exceptional cases, a suspension of studies may be granted by decision of the Board of Trustees. The time of the suspension of studies is not counted in the total required duration of the award of the Master's degree. In addition, upon justified request of the student and in the context of the smooth completion of the thesis, the Board of Trustees may approve an extension of studies beyond the six (6) academic semesters.

During the suspension of the student status, the academic identity card and the library card are returned to the programme's secretariat and all legal rights deriving from it are suspended (Par.3 Article 42 of Law 4521/2018). In case the maximum time limit is exceeded, the postgraduate student is removed from the programme after a decision of the Board of Directors.

If the postgraduate student wishes to discontinue his/her studies permanently or temporarily, he/she must submit a request to the Programme Secretariat, which will bring it to the attention of the Director of the S.C.

Permanent discontinuation of studies may be effected upon submission of a written request by the postgraduate student to the S.T., which is irrevocable.

Withdrawal of a postgraduate student from the MSc may be made for the following reasons:

1. Failure to fulfill the obligations of the postgraduate student as described in the Internal Regulations of the Postgraduate Programme.

2. Failure to pay the prescribed tuition fees.

3. Disciplinary offences such as breach of academic ethics, copying or plagiarism and in general any violation of the provisions on intellectual property by a postgraduate student during the writing of coursework or the preparation of the thesis.

The deletion is made after a relevant recommendation of the P.M.S. Committee to the P.M.S. and the relevant decision is taken by the P.M.S. The relevant decision is communicated within 15 days to the graduate student concerned and he/she has the right to submit an appeal within

one month from the date of the relevant decision. The appeal shall be finally decided by the above bodies.

In the event of a definitive discontinuation or withdrawal of a postgraduate student for any reason, the fees already paid shall not be refunded.

ARTICLE 9

CURRICULUM

9.1 General

The registration of admitted postgraduate students each year takes place within deadlines set by the Board of Directors.Admitted postgraduate students can be informed from the website of the MSc and/or from the Secretariat of the MSc.

The conditions of study included in the Regulations of the MSc are accepted by each candidate upon registration. The candidate, before enrolling, takes note of these Regulations.

The successful examination in all courses of the curriculum, the successful completion of the Postgraduate Diploma Thesis, and the accumulation of 90 credits are necessary prerequisites for the award of the Master's degree.**9.2 9.2 9.2 Academic Calendar of the Programme**

At the beginning of each semester and before the beginning of the courses of the MSc, the Academic Calendar is announced to the postgraduate students. The Academic Calendar of the MSc includes the start and end dates of the semesters, the examination periods and holidays.

9.3 Course days

Courses may be held on all working days of the week including Saturday.

9.4 Course substitutions

In the event of an impediment to the course, it will be replaced in time. The date and time of the make-up are posted on the website of the MSc.

9.5 Absence limits

Postgraduate students are required to attend all activities of the MSc.A postgraduate student is considered to have attended a course (and therefore has the right to participate in the examinations) only if he/she has attended at least 80% of the teaching hours of the course. Exceptions are allowed only for serious reasons and after examination of the subject in the S.T. In any case, attendance and participation are established under the responsibility of the course lecturers.

9.6 Detailed curriculum

The University of West Attica, as an institution with a focus and special concern for research, requires that this postgraduate programme undertake, from the beginning of its operation, a regular review and reform of the course content in order to ensure the improvement of the quality of the educational work.

With the proposed structure of the curriculum, the MSc aims to explore and develop the collaborative and effective performance of the participating students, by applying active learning practices in the context of group work and postgraduate thesis.

The semester structure of the programme provides for:

In the first semester

-compulsory courses (C) for all students

In the second semester:

-compulsory courses (C) and one seminar (S) for all students

In the third semester:

-Postgraduate Diploma thesis.

The indicative course programme is presented in the following tables.

1st SEMESTER			
COURSE CODE	COURSE TITLE	C: Compulsory	ECTS
A1	Fundamentals of Circular Economy and IndustrialEcology	Y	8
A2	Analysing Physical Processes	Y	8
A3	Climate System and Climate Change	Y	7
A4	Earth System Science and Analysis	Y	7
TOTAL NUMBER OF SEMESTER ECTS REQUIRED		30	

2nd SEMESTER			
COURSE CODE	COURSE TITLE	C: Compulsory	ECTS
B1	Strategic Sustainability Management	Y	6

B2	Value Chain Management	Ŷ	6
B3	Environmental Decision-Making	Y	6
B4	Sustainable Business Models	Y	7
B5	Sustainability and Innovation Management	Y	5
TOTAL NUMBER OF SEMESTER ECTS REQUIRED		30	

3rd SEMESTER			
COURSE CODE	COURSE TITLE	C :Compulsory	ECTS
ΔΕ	Diploma thesis	Y	30
TOTAL NUMBER OF SEMESTER ECTS REQUIRED		30	

The educational approach emphasises the encouragement of self-direction of the students to cultivate research methodology by assigning personal projects to each student for each course individually and includes the following methodologies:

-Classroom lectures using information technologies (digital slides)

-Workshops in the premises of the Department of Industrial Design and Production Engineering

-Field visits to companies, collaborating research centres and health institutions such as hospitals

-**Special seminars** by Biomedical Engineering professionals at the facilities of the Department of Biomedical Engineering and at the facilities of partner Biomedical Engineering institutions/companies

-**Projects** to deepen the knowledge of the subject matter of each course, to encourage students' self-direction and to practice research methodology

All the educational material is posted on the eclass platform of the PADA and consists of slides, scientific articles, e-books, educational videos, self-assessment questionnaires, etc.

The credits, which correspond to each of the courses of the MSc and are presented in the above "Course Programme", will be accumulated and automatically recognised to the participants. A brief description of the course content is provided below:

A1. Fundamentals of Circular Economy and Industrial Ecology

This course offers an introduction to the Circular Economy, starting from the limits of our current system and describing how circular thinking can offer a promising alternative. The main theoretical content related to Circular Economy is presented. The main principles of the Circular Economy are then provided, all the changes and positive effects of incorporating this system, the advantages and barriers to its implementation. Some examples of companies implementing the Circular Economy are also presented.

A2. Analysing Physical Processes

The aim of the course is to introduce the analysis and design of basic physical processes. Included as modules are the introduction, the basic principles of process analysis and design, the analysis and design of experiments and fluid flow mechanics. Concepts such as thermal processes with simultaneous mass transfer (humidification, dehumidification, drying), particle engineering (filtration, centrifugation, precipitation, cyclones, filters, crystallization, fracturing, agglomeration) will be analyzed and explained to the participants of the program.

A3. Climate System and Climate Change

Climate Change is an introductory course in the fields of natural and anthropogenic climate variability. At the end of the course, the student is expected to understand the concept of climate change, analyze the scenarios and dynamic interactions between climate systems, and be familiar with reset policies. In addition, the concepts of climate change and climate variability, the analysis of the energy balance of the earth-atmosphere system, the natural and enhanced greenhouse effect and greenhouse gas emissions are presented. The impacts of climate change and its effects on the global climate system, the role of land use change in climate change and its role in shaping the global climate system, as well as the process of forecasting future weather and climate are integral parts of this course.

A4. Earth System Science and Analysis

The course includes a general introduction to the science of the study and analysis of the earth and its phenomena, as well as its epistemological development. The sciences that systematically study the earth by describing its surface and the phenomena that take place on it are sciences that use methodologies to study man's relationship to the earth. The course presents studies of how people use and shape the space in which they live, and how the earth affects the way people live. The course includes a comprehensive study of space, which can be divided into (a) the distribution and identification of natural phenomena and (b) the distribution and identification of phenomena associated with human societies.

B1. Strategic Sustainability Management

The aim of the course is to understand the current ecological problem, to consolidate the basic principles of sustainable development in Europe and the world and to specialise and promote knowledge in sustainable development systems. In addition, the course aims to acquire knowledge and cultivate skills to enable participants to understand and address issues of development and environmental quality in the perspective of sustainability, to interpret environmental issues in a systemic and critical way, recognising their social, physical, economic and political perspectives. This course presents and discusses issues related to sustainability (environmental and social) and sustainable development. In particular, issues related to energy and its management, water resources management, natural resource management, strategies to improve urban environment in the perspective of sustainability, shaping sustainable cities and environmental policy issues. Issues are also developed regarding the obligations of institutions and organisations to develop practices in the perspective of environmental protection and sustainability, and the concept of Corporate Social Responsibility as a tool for developing cooperation between institutions and organisations is discussed.

B2. Value Chain Management

The course aims to provide an understanding of the impact of an integrated supply chain management system on key operational activities such as marketing, product design, information systems, manufacturing planning and control, inventory management, human resource development, financial planning, forecasting, quality management and other related issues. The key factors underlying logistics and supply chain management, the impact of information and communication technologies (ICT) on supply chain management, the

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development of logistics systems based on the identification and integration of priority service issues according to needs, and the main opportunities arising from the adoption and operation of such an integrated management model are presented.

B3. Environmental Decision-Making

The course presents an introduction to decision making systems, the architecture of decision support systems, decision models and the necessity and techniques of decision support. There is a strong emphasis on the environment and business and development decision making, quantification of environmental impacts and parameters, and economy-environment interactions. The causes of ignoring or underestimating environmental parameters, the constitution of environmental - economic parameters, as well as environmental indicators and sustainability criteria are studied. In addition, participants are provided with knowledge on decision support under uncertainty, criteria and decision trees, the value of information, risk analysis and multi-criteria analysis. Much attention is given to the role and preference system of the decision-maker, the set of possible options, the formulation of the set of decision criteria, and even the set of capable solutions, or the selection of the optimal solution of a trade-off.

B4. Sustainable Business Models

This course presents the challenges and pressures on businesses to be prepared for what is going to happen in the near future, as sustainability should not be considered just another keyword, but an integral part of any business model. A sustainable business model focuses on the value it can add to stakeholders, the environment and society - while continuing to make a profit, improve and grow. It introduces participants to the way in which a sustainable business model (SBM) considers a wide range of stakeholder interests, including the environment and society. This can help to integrate sustainability into the business purpose, then into processes and explore what are the key drivers for competitive advantage. In addition, it provides insights and methodologies by which organisations should consider all drivers and reasons for sustainability and how they adapt their business models to incorporate them. There are many tools and approaches that can be used. However, all sustainable business models have some common characteristics.

B5. Sustainability and Innovation Management

The course starts with an introduction to sustainable development and the conditions for its achievement. The dimensions of sustainable development - economic, social and ecological - are then analysed in detail. Then the importance of local knowledge for achieving sustainability and the role it is called upon to play in order to implement sustainability is listed. The second section of the course provides an extensive analysis of the concept of innovation. Specifically, the module starts with an introduction to the concept of innovation and in particular to a specific case study. The concept of networking and its importance for the diffusion of innovations in the specific case study area is analysed. The necessity of knowledge in the diffusion of innovations and the learning that must be achieved in order for people and those involved in the production process to be able to accept and adopt an innovation is then discussed. The concept of sustainability as an innovation for any production line is emphasised. The role of people in the acceptance and adoption of innovations is also outlined, and the role of society in the process of adopting innovations is highlighted.

9.1 Distance learning

Teaching will be mainly face-to-face, reinforced by hybrid methods, i.e. modern and asynchronous distance learning tools.

In accordance with the provisions of Article 30 of Law No. 4485/2017 (A' 114), part of the programme of the MSc is taught by distance media up to 35%.

ARTICLE 10 Teaching Staff

The teaching of the courses or the auxiliary teaching work may be undertaken in accordance with the provisions of the current legislation (par.1, article 36 of Law 4485/2017 and article 242 of Law 4610/2019) by the relevant Department and in a percentage of at least 60%, members of the teaching staff, members of the teaching staff, R.I.P. and R.T.I.P. (holders of a doctoral degree unless their subject is of exceptional and undisputed specificity for which the preparation of a doctoral thesis is not possible or usual), professors emeritus (Art.69, Law 4386/2016) and retired members of the Faculty, members of the E.E.P., E.D.I.P. and E.T.E.P, holders of a postgraduate degree, under the supervision of a doctoral candidate and after the decision of the Assembly, teaching according to the P.D.407 /1980 (A' 112), academic fellows of

the Department, holders of a doctoral degree, doctoral candidates who may be employed as academic fellows in the Department, under the supervision-coordination of a doctoral faculty member and following a decision of the Board of Trustees, or with another employment relationship with the Department by decision of the Board of Trustees to carry out teaching and research work, determined by the contract signed between the contractor and the relevant university (paragraph 7, article 29, Law 4009/2011).

In addition, if the lecturers of the previous category are not sufficient, the MSc may employ, in accordance with the provisions of the current legislation and with a reasoned decision of the Board of Trustees (article 36, paragraph 2 of Law 4485/2017 and article 242 of Law 4610/2019), lecturers from outside the Department concerned and for the percentage remaining above the minimum (60%) specified in par. 1 of Art. 36, who will be members of the teaching staff, retired professors of other Departments of the same or other universities, researchers from research centers of Article 13A, Law 4310/2014 and the Academy of Athens or new recruitments / contracts may be made in accordance with the above.

In addition to the provisions of the above paragraphs. 1 and 2 of art.36, may be invited to the MSc (par. /2017), as guests, renowned scientists, who have the position or qualifications of a professor or researcher in a research center, artists or scientists of recognized prestige with specialized knowledge or relevant experience in the subject matter of the MSc, as well as visiting postdoctoral researchers, holders of a doctoral degree (paragraph 7, article 16, Law 4009/2011), to meet the educational needs of the MSc.

ARTICLE 11 EXAMINATIONS AND ASSESSMENT OF POSTGRADUATE STUDENTS

Course examinations may be written and/or oral in developmental and/or multiple-choice topics, and/or may include one (1) or more assignments. The method of assessment/examination will be determined by the course coordinating tutor for each course, announced orally at the first lecture of the course and posted on the course eclass website. Successful completion of the course is equivalent to a grade of five (5) with a perfect score of ten (10). The responsibility for the examinations and the posting of the examination schedule for each academic year lies with the Board of the MSc.

Winter and spring semester courses are re-examined during the September examination period, which lasts up to two (2) weeks.

If a postgraduate student fails the examination of a course or courses three (3) times, he/she may be examined, at his/her request, by a three-member committee of faculty members in the same or related subject area as the course being examined. These committees are appointed by the Board of Directors. The lecturer in charge of the examination is excluded from the committee (paragraph 7, article 34, article 34 of Law 4485/17).

The successful examination in the required courses of the curriculum, the successful completion of the Master's Thesis, and the accumulation of 90 (ninety) credit points, with thirty (30) credit points for each semester of study, are necessary prerequisites for the award of a Master's degree.

The degree of the M.Sc. is the sum of the product of (credit hours x course grade) plus (credit hours x thesis grade) divided by the total number of credit hours of course and thesis credits.

ARTICLE 12

POSTGRADUATE THESIS - SUPERVISORS OF POSTGRADUATE THESIS

In the 3rd semester of the programme, the preparation of a postgraduate thesis is foreseen. At the beginning of each academic year, possible topics for postgraduate theses will be announced, which will be proposed by the lecturers of the MSc. In consultation with one of the lecturers of the MSc, students will undertake the preparation of the postgraduate thesis, which can be completed within one semester at the earliest.

The presentation of all postgraduate theses will take place on specific dates at the end of each semester in the form of a workshop open to all interested parties. In case of a serious and well-documented problem, it will be possible to present the theses on different dates upon request of the interested party and approval of the Board of Trustees.

The supervisor of the postgraduate thesis may be a member of the faculty, a holder of a doctoral degree, or a doctoral candidate of a Research Centre Member teaching in the MSc and appointed by the Board of Directors in the 3rd semester. The SC, upon request of the candidate, in which the proposed title of the thesis is indicated and an abstract of the proposed thesis is attached, sets up by June of the current academic year the three-member examination committee for the approval of the thesis, one of the members of which is the supervisor. In its decision, the SC shall take into account the relevant proposal of the Supervisor for the other two (2) members of the three-member examination committee, one of whom may be a faculty

member of another HEI or a Doctoral Researcher of Research Institutions or a Doctoral Researcher of a Public Institution. In any case, provision must be made for at least two (2) members of the Committee to be faculty members of the Department concerned.

The subject of the Master's thesis must be of a research nature and must be original.

The language of the thesis is English.

For the writing of the postgraduate thesis, the candidates must follow the instructions of the thesis template posted on the website of the MSc.

In order for the thesis to be approved, the student must support it before the examination committee (paragraph 4, article 34, Law 4485/2017). The thesis is graded like any other course on a scale of zero to ten (0 - 10). The minimum passing grade is set at "five" (5). All theses are presented during the last month of the last three academic semesters. The exact dates of the presentation will be set by the Director of the MSc at least one month before the presentation. At the end of the three semesters the postgraduate student must have completed and supported his/her thesis (except in cases of "extension" or "suspension" of studies).

ARTICLE 13

OBLIGATIONS AND RIGHTS OF POSTGRADUATE STUDENTS

1. Postgraduate students are required to renew their registration at the beginning of each semester. A student who has not renewed his/her registration or who has not attended classes for two semesters, or who has not attended classes for two semesters, must renew his/her registration at the beginning of each semester (2 consecutive semesters) shall lose his/her status as a postgraduate student and shall be removed from the Registers of the MSc.

2. Postgraduate students have all the rights and benefits provided for students of the first cycle of studies, except for the right to free textbooks. The Foundation is obliged to ensure that students with disabilities and/or special needs have accessibility to the proposed textbooks and teaching (par. 3, no. 34, Law 4485/2017).

3. Postgraduate students are invited to participate and attend seminars of research groups, discussions of bibliographic information, visits to laboratories in the subject of the MSc, conferences/meetings with a subject related to the MSc, lectures or other scientific events of the MSc, etc.

4. The Board, after the recommendation of the Board, may decide to withdraw postgraduate

students if:

- exceed the maximum duration of study in the MSc, as defined in this Regulation, unless there are proven serious and exceptional reasons (article 42, paragraph 3 of Law 4521/18, Government Gazette 38/2-3-2018, vol.)

- they commit an offence that falls under the law on intellectual property (Law 2121/93) when writing their work

- fail to pay the prescribed tuition fee within the maximum limits as set out in detail in the call for expressions of interest

- automatically at the request of postgraduate students

5. The S.T. determines the successful completion of the course of study in order to award the (par. 3 article 31 article 31 of Law 4485/2017). The determination and awarding of the D.M.S. is done publicly, in a special ceremony in front of the Rector's Authorities and the President of the Department or his/her Deputy.

6. During the period of time until the awarding of the degree, a certificate of completion of studies is issued by the Secretariat of the MSc, indicating the date of graduation.

7. A Master's degree is not awarded to a student whose first cycle degree from a foreign institution has not been recognized by the I.O.A.T.A.P., in accordance with the law. 3328/2005 (A' 80).

8. Postgraduate students may request the issue of a diploma supplement.

ARTICLE 14

EVALUATION OF THE MSc

At the end of each semester an evaluation of each course and each lecturer is carried out by the postgraduate students (par.1., article 44, Law 4485/2017). The evaluation is carried out using a special evaluation form/questionnaire completed by the postgraduate students. The questionnaire may be administered for completion in electronic form on a platform that ensures the anonymity of the student. The questionnaire shall cover course and faculty evaluation. Courses are evaluated in terms of content, teaching style, teaching material, and the degree of relevance to the principles and philosophy of the postgraduate programme. Instructors are evaluated on their knowledge and their ability to transmit it to students, their

preparation, their use of current literature, their willingness to answer questions, their timely grading and returning of assignments and written examinations, and their adherence to course hours.

The analysis of the evaluation data with the comments of the postgraduate students as well as the comparative tables are prepared under the responsibility of the Programme Secretariat. The prepared tables are delivered to the Director of the MSc. The Director of the MSc Programme shall inform each lecturer of the result of the evaluation concerning him/her, after the submission of the mark scheme for the of his/her course.

ARTICLE 15

RESOURCES AND EXPENDITURE - TUITION FEES - EXEMPTION FROM TUITION FEES - SCHOLARSHIPS AND PRIZES

15.1 Resources (article 37(1) of Law 4485/2017)

The funding of the MSc can come from:

a) the budget of the HEI and its collaborating institutions (article 43, Law 4485/2017)

b) the budget of the Ministry of Education, Research and Religious Affairs (Article 37(1) of Law 4485/2017)

c) donations, benefits, bequests and all kinds of sponsorships of public sector entities (case a) of para. 1 of Article 14 of Law No. 14 (a) a) of Article 14 of Law No. 14) of the Public Sector, including grants, donations, endowments, endowments, endowments and bequests of public funds, etc. 4270/2014 (A' 143)), or the private sector

d resources from research projects

e) resources from programmes of the European Union or other international organisations f) part of the revenues of the Special Research Funding Accounts (SRAs) of the HEIs.

g) any other legitimate reason (Article 37(1) of Law 4485/2017)

In justified cases, in which the operating costs of a MSc are not fully covered by the above funding sources, part of the operating costs may be covered by tuition fees (Article 37(2) of Law 4485/2017).

15.2 Expenditure (article 37(4) of Law 4485/2017)

The revenue of the MSc is managed by the E.L.K.E. and is distributed as follows: (a) Seventy percent (70%) operating expenses of the program which are allocated to teaching,

administrative and technical support, travel, equipment, software, consumables, scholarships for graduate students and other expenses. Compensation costs for regular faculty, technical and administrative staff of the Institutions shall be for work in excess of their statutory obligations. b) Thirty percent (30%) to cover operating expenses of the Institution, with priority to cover the needs of the MSc programmes that operate without tuition fees (Article 37(4) of Law 4485/2017). The above allocation does not apply in case of donation, bequest or sponsorship for a specific purpose, as well as for government grants (Article 37(5) of Law 4485/2017). The Department must annually publish, by posting on its website, a statement of income and expenses, indicating the distribution of expenses by category, and in particular the amount of tuition fees, the fees of the lecturers of the MSc and the number of lecturers who received them (article 37 par. 6 of Law 4485/2017). /2017).

15.3 Tuition fees - Exemption from tuition fees (article 35 of Law 4485/2017)

Postgraduate students of the MSc are required to pay tuition fees. The amount of the prescribed tuition fees for the entire MSc is set at three thousand (3,000) euros. The possibility of paying them in instalments is provided. They shall be paid in three (3) instalments (first instalment: immediately after the finalisation of the selected postgraduate students and by the end of October (# 1000,00 # \in), second instalment: by the end of February (# 1000,00 # \in) and third instalment: by the end of June (# 1000,00 # \in). The relevant amounts shall be deposited in a bank account of the Special Research Fund Account of the PADA. The timetable for the payment of instalments may be modified following a decision of the Board of Trustees.

In case of waiting for a scholarship and exemption of tuition fees, the candidate may not pay tuition fees until the notification of the scholarship allocation decision.

In the event that the postgraduate student has not paid the amount of the instalment within the above specified time periods, an official written notification will be sent by the Department's Secretariat to the email address provided in his/her application, informing him/her of the amount due. If, after one month from the date of sending the email, the student has not paid the fee, the responsible employee of the Department's secretariat will inform the Director of the MSc who will recommend to the Board of Directors the discontinuation of the postgraduate student's studies.

In case of withdrawal from the programme, regardless of the reason, the fees already paid will not be refunded.

Exempted from the tuition fees (par.2 article 35 of Law 4485/2017), students whose income

(individual or family income) does not exceed one hundred percent (100%) of the national median disposable equivalent income, according to the latest published data of the Hellenic Statistical Authority. In any case, the exempted students should not exceed thirty percent (30%) of the total number of students admitted to the MSc.

In any case, the exempted students should not exceed thirty percent (30%) of the total number of students admitted to the MSc.If the beneficiaries exceed the above percentage, they are selected in order of ranking starting from those with the lowest income. For the application of this paragraph, the income of the last tax year, for which at the time of selection to the MSc, the tax clearance has been completed, according to the provisions of the Income Tax Code, shall be taken into account by the Committee established under case d' of paragraph 3 of article 31 of Law 4485/17. The application for exemption of tuition fees is submitted by the interested party to the Department after the completion of the selection process of students to the MSc. The financial situation of a candidate is in no case a reason for not being selected for a P.M.S. Those who receive a scholarship from another source are not entitled to an exemption.

15.4 Scholarships and awards

The MSc may provide a number of scholarships based on academic criteria to full-time students, according to a decision of the Board of Trustees, which determines the amount of the scholarships, the supporting documents, the evaluation criteria and the procedure for the awarding of scholarships, as well as the obligations and rights of the scholarship holders (par.4 article 35 of Law 4485/2017).

The scholarships are included in the approved budget of the MSc. The MSc may also in exceptional cases grant awards to students with exceptional performance, according to criteria and procedure to be provided by decision of the Board of Trustees.

ARTICLE 16

STUDY ADVISOR

For each postgraduate student, a member of the teaching staff is appointed by the Board of Trustees, following a proposal of the Board of Directors, as a study advisor. The academic advisor monitors the student's progress, provides specific information about the MSc and the correlation of the studies with the student's scientific background and perspective, discusses with the student his/her future plans for academic and professional development, advises the

student on the improvement of his/her work in relation to the requirements of the Department, on the use of the University's resources and infrastructure and, in general, on academic, organizational or administrative matters and may recommend matters concerning the student to the S. The academic adviser does not necessarily supervise the student's thesis.

ARTICLE 17

The student is required to indicate in an appropriate manner if he/she has used the work and opinions of others. Copying someone else's work, as well as using someone else's work - published or unpublished - without proper attribution constitutes plagiarism and is considered serious academic misconduct. The copying of any documentary material, even from the candidate's own studies, without reference, may constitute grounds for a decision by the Board of Trustees to expel the candidate, after he/she has been given the opportunity to express, orally or in writing, his/her views on the matter.

Any misconduct or violation of academic ethics will be referred for addressing the problem to the S.T. The misconduct of copying in written examinations or plagiarism and in general any violation of the provisions on intellectual property by the student during the writing of coursework or the preparation of the Diploma Thesis are also considered as violations.

ARTICLE 18

DURATION OF OPERATION

The Postgraduate Programme "Circular Economy and Sustainability Strategies" operates from the academic year 2022-2023 until the academic year 2026-2027, if it meets the criteria of internal and external evaluation, according to par. 8 of article 32 and paragraph 8 of article 32. 6 of article 44 of Law 4485/2017 (with the possibility of renewing its operation according to the terms of the current legislation).

ARTICLE 19

STUDENT BENEFITS

-Postgraduate students have all the rights and benefits provided for first cycle students, except for the right to free textbooks.

-Postgraduate students who have no other medical and hospital care are entitled to full medical and hospital care in the National Health System (NHS) with the relevant costs covered by the National Health Service Provider.

-Postgraduate students may apply for external funding for their studies from various public and private sector institutions or bodies and Research Institutes.

-Postgraduate students may be financially covered by funded research projects in which they participate. The relevant details shall be laid down by a decision of the Board, on the recommendation of the Director of Studies.

-Postgraduate students may participate in the University's student exchange programmes (e.g. ERASMUS) or in other research programmes of foreign universities, within the framework of transnational agreements of the Department of Biomedical Engineering with peer institutions and may be enrolled as visiting students.

ARTICLE 20

ADMINISTRATIVE SUPPORT - LOGISTICAL INFRASTRUCTURE

For all matters related to the MSc, those interested can contact the Secretariat of the MSc, which, together with the Secretariat of the Department of Industrial Design and Production Engineering, is responsible for the administrative support, organization and operation of the MSc, as well as for the handling of registration and examination issues, grades, certificates and awarding of the degree to students.

The MSc will operate in the facilities of the Department of Industrial Design and Production Engineering, School of Engineering, in Building Z of the P.D.A. in the Ancient Eleonas Campus. The Department has a sufficient number of classrooms and laboratory spaces for the uninterrupted conduct of the theoretical and laboratory courses of the MSc.

The MSc provides for teaching by distance education media at a rate of no more than thirty-five percent (35%) in accordance with para. 3, article 30 of Law 4485/17 or as defined by the

applicable legislation.

For the operation of the MSc, the classrooms, computer rooms, laboratories and the Library of PADA are available.

The additional special equipment needed will be provided, as appropriate, from the resources of the specific programme.

ARTICLE 21

WEBSITE OF THE MSc

The MSc "CIRCULAR ECONOMY AND SUSTAINABILITY STRATEGIES" has its website

in English: <u>https://msc-circulareconomy.uniwa.gr/</u>. The official website of the MSc is constantly updated and provides all the information of the MSc. The website is also the official website of the Master's programme.

ARTICLE 22

REVISION OF THE CURRICULUM

The regular review of the MSc is carried out every two years. In this case, the BoG appoints a Curriculum Review Committee, which recommends for final approval to the BoG.A revision or addition/deletion of specific articles may be implemented on an exceptional basis during the two-year period following a decision of the BoG.In this case, the BoG appoints a review committee which recommends specific modifying provisions. The incorporation of these provisions/articles requires the final approval of the SC.

ARTICLE 23

SPECIAL PROVISIONS

Any issue that arises in the future that is not covered by the relevant legislation or this Regulation will be addressed by decisions of the competent bodies and, where necessary, by amending the Regulation.

Signed and sealed Panagiotis Kaldis Rector