

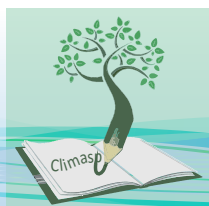


CLIMASP

AN INTERDISCIPLINARY MINOR ON CLIMATE CHANGE AND SUSTAINABILITY POLICY



Co-funded by the
Tempus Programme
of the European Union



CLIMASP

Climate Change and
Sustainability Policy



University of Crete

THE CLIMASP INTERDISCIPLINARY PROGRAM

It is well documented that the major challenge of the next decades will be the sustainability of resources and the problems related to climate change. Thus, it is important to provide the future labor force with the necessary knowledge regarding the various aspects of sustainability, which will enhance the employment potential and status of our graduates.

The development of this minor is a result of a funded project through a CONSORTIUM AGREEMENT ON THE IMPLEMENTATION OF TEMPUS PROJECT *“Development of an Interdisciplinary Minor Program on Climate Change and Sustainability Policy–CLIMASP”* (Reference No. -543879TEMPUS-1-2013-1-GR-TEMPUS-JPCR) (Grant Agreement No. 001-001/5043-2013).

This TEMPUS project, in accordance with the Grant Agreement signed by the Education, Audiovisual and Culture Executive Agency as the financier and the University of Crete as the Coordination Institution of the project, is designed and implemented across 10 universities in Jordan, Egypt and Lebanon (The Lebanese American University and Notre Dame University).

CLIMASP gives students the opportunity to earn a formal credential (Euro-Arab Pass Diploma) in climate change and sustainability policy in addition to the degree of their specialization granted by the university.



INTER/MULTIDISCIPLINARITY

Students from the Adnan Kassar School of Business (AKSOB), School of Architecture and Design (SArD), School of Arts and Science (SAS), and the School of Engineering (SOE) may choose to enroll in the CLIMASP minor. This minor is expected to broaden their choice of further studies and career paths.

CLIMASP Project Partners

- University of Crete (Greece)
- Leuphana University (Germany)
- Frederick University (Cyprus)
- Notre Dame University–Louaize (Lebanon)
- The Lebanese American University (Lebanon)
- Heliopolis University for Sustainable Development (Egypt)
- The Suez Canal University (Egypt)
- Aswan University (Egypt)
- Port Said University (Egypt)
- The University of Jordan (Jordan)
- The American University of Madaba (Jordan)
- Jerash Private University (Jordan)
- In addition to the following NGOs: Jordan Environment Society, Education for Employment Foundation, Egyptian Business Women Association.



WHY CHOOSE THE CLIMASP MINOR?

CLIMASP offers students a unique inter/multidisciplinary understanding of climate change. It provides a shift from a strict disciplinary orientation focused on natural sciences to other issues related to science, engineering, education, economics, sociology, architecture, etc. In fact, choosing a minor combined with a major enables students to pursue an area of interest with considerable employment possibilities by acquiring the necessary knowledge and skills.

There are many advantages to choosing this minor, as it primarily:

- Opens up significant career opportunities.
- Provides the student with more hands-on experience.
- Helps the student shape his future path.
- Enriches the student's major study program.
- Adds depth and breadth to the student's studies.

The curriculum of the CLIMASP minor is designed to provide undergraduate students from different majors with the flexibility to select courses that enhance their interests in climate change and reinforce their major field of study with professional skills in climate change adaptation policies and planning.

COMPOSITION OF THE MINOR

The CLIMASP minor consists of core courses, elective courses and the required capstone course in three concentration areas: 1) Climate Change, Environment and Society; 2) Climate Change, Economics and Public Policy; and 3) Climate Change, Science and Technology. As these courses form an integral part of the participating disciplines curricula, the CLIMASP minor is invaluable to students seeking a meaningful and rewarding complement to their main field of study. Upon completion of the minor along with their major, students will be granted the Euro-Arab Pass diploma provided they fulfill 45 to 60 relevant European Credit and Transfer System (ECTS) credits. The CLIMASP minor program is administrated by the Euro-Arab Center for Interdisciplinary Studies?????????

The student shall be aware of the Undergraduate Rules and Procedures document.



MISSION

The mission is to provide a quality education in Climate Change and Sustainability Policy that combines theory and practice for undergraduate students, and to satisfy industry demand for graduates with special education in sustainability that helps them enter the market force or pursue graduate studies.

PROJECT OBJECTIVES

- Develop capacity-building workshops that underpin the interdisciplinary and multi-stakeholder driven climate change curricula responsive to societal needs;
- Develop an undergraduate interdisciplinary program on climate change and sustainability policy in each partner country university;
- Integrate, implement and assess the CLIMASP program as an integral part of existing undergraduate academic degrees and;
- Contextualize the Europass supplement diploma in the partner universities and the region.

LEARNING OUTCOMES

Student Outcomes (SO) describe what students are expected to know and be able to do by the time they graduate. These relate to the skills, knowledge, and behaviors that students acquire as they progress through the minor. CLIMASP aims at:



1. Solving climate change and sustainability policy problems using knowledge of applied mathematics, science, and economics, etc.
2. Acquiring, analyzing, and using technical data to design climate change and sustainability policy.
3. Integrating professional, ethical, social, and environmental considerations into climate change and sustainability policy design and problem solving.
4. Developing the ability to communicate results effectively and providing experience in team efforts.
5. Acquiring the habit of continuous learning to maintain technical competence and keep abreast of contemporary issues.

MINOR REQUIREMENTS

- To obtain this minor, the student is required to complete a minimum of 30 ECTS (18 credits). The minor consists of: (i) 3 core courses (9 credits representing one course from each concentration area), (ii) at least 1 course from CA1, (iii) at least 1 course from CA2, (iv) at least 1 course from CA3.
- To obtain the Euro Arab Pass with this minor, the student is required to complete a minimum of 60–45 ECTS (36–27 credits). In this case, the minor will consist of: (i) 3 core courses (9 credits representing one course from each concentration area), (ii) at least 1 course from CA1, (iii) at least 1 course from CA2, (iv) at least 1 course from CA3, (v) in addition to the capstone and internship (15 ECTS or 9 credits).

- As for the capstone and internship (15 ECTS or 9 credits), the student is expected to pay for 3 credits for the capstone and 1 credit for the internship.
- To receive this minor, the student must achieve a CGPA of at least 2.0 in the courses related to the minor.
- Some of these courses may count toward fulfilling the requirements and technical elective components of a student's program of study. As a result, the student is expected to complete less than the actual minor requirements.

MINOR ELIGIBILITY

The CLIMASP minor is interdisciplinary. There are no special admission requirements for SOE, SAS, SArd, or AKSOB students. Students can enroll in this minor in their second year of study.

ENROLLING IN THE MINOR

To register in the CLIMASP minor program, you need to register for courses offered as part of the minor requirements.

MINOR ADVISOR/COORDINATOR

- Dr. Jean Chatila, (LAU CLIMASP Coordinator): jchatila@lau.edu.lb



TYPICAL COURSE OFFERING

Subsequent to the deliberations of the partners during different workshops and meetings, it was agreed that the structure of the minor shall be as follows: students from CA1 have to take at least 2 courses from CA2 and 2 courses from CA3, according to their preferences (electives); the capstone course will be equivalent to 15 ECTS that will focus on an independent study/internship (9 credits); the capstone can be a combination of an internship and directed studies project.

CLIMASP MINOR (18 Credits Option)	
CA1: Climate Change, Environment and Society	One core course and one elective course
CA2: Climate Change, Economics and Public Policy	One core course and one elective course
CA3: Climate Change, Science and Technology	One core course and one elective course

CLIMASP MINOR (27 Credits: Euro-Arab Pass Option)		
CA1: Climate Change, Environment and Society	One core course and one elective course	
CA2: Climate Change, Economics and Public Policy	One core course and one elective course	
CA3: Climate Change, Science and Technology	One core course and one elective course	
Capstone 15 ECTS	Capstone	Any CA (preferably CA1)
	Internship	



CLIMASP RECOMMENDED STRUCTURE						
CLIMASP Orientations	CA	Course ID	Course title	ECTS*	Department	School
Core Courses	1	CIE 522	Environmental Impact Assessment	5	Civil Engineering	SOE
	2	ECO 320	Environmental, Resource and Energy Economics	5	Economics	AKSOB
	3	ENV 230	Sustainability in Practice	5	Natural Science	SAS
Elective Courses	At least 1 Course from CA1					
	At least 1 Course from CA2					
	At least 1 Course from CA3					
Capstone Project	Equivalent to 15 ECTS: has to be selected properly to meet the minimum concentration area requirements, if needed.					

CA1: Climate Change, Environment and Society

Course No.	Course title	ECTS*	Department	School
ENV 210	Climate Change Risks to Ecosystems and Biodiversity	5	Natural Science	SAS
ENV 211	Conserving Biodiversity in a Changing Climate	5	Natural Science	SAS
ENV 222	Social Aspects of Renewable Energy for Rural Development	5	Natural Science	SAS
CIE 434	Civil Engineering Profession	3	Civil Engineering	SOE
CIE 522	Environmental Impact Assessment	5	Civil Engineering	SOE
EDU xxx	Curriculum Design	5	Education	SAS

CA2: Climate Change, Economics and Public Policy

Course No.	Course title	ECTS*	Department	School
ENV 223	Financing Renewable Energy	5	Natural Science	SAS
ECO 311	Development Economics	5	Economics	AKSOB
ECO 3320	Environmental, Resource and Energy Economics	5	Economics	AKSOB
ECO XXX	Challenges of Sustainable Development	5	Economics	AKSOB
CIE 525	Environmental Policy and Management	5	Civil Engineering	SOE

CA3: Climate Change, Science and Technology

Course No.	Course title	ECTS*	Department	School
BIO 203*	Introduction to Ecology	5	Natural Science	SAS
BIO 331*	Ecology	5	Natural Science	SAS
ENV 200	Introduction to Environmental Sciences	5	Natural Science	SAS
ENV 220	Renewable Energy for Sustainable Development	5	Natural Science	SAS
ENV 224	World Ocean Solutions	5	Natural Science	SAS
ENV 225	Energy in Buildings	5	Natural Science	SAS
ENV 230	Sustainability in Practice	5	Natural Science	SAS
ENV 423	Environmental Microbiology	5	Natural Science	SAS
DES 523	Environmental Systems I	5	Architecture	SArD
DES 524	Environmental Systems II	5	Architecture	SArD
MEE 401	Energy Systems and Sustainable Environments	5	Mechanical Engineering	SOE
MEE 599	Advanced Power Trains	5	Mechanical Engineering	SOE
MEE 599J	Energy Audit	5	Mechanical Engineering	SOE
CIE 424	Water Distribution and Treatment	5	Civil Engineering	SOE
CIE 426	Wastewater Collection and Treatment	5	Civil Engineering	SOE
CIE 427	Environmental Engineering- SOFT	5	Civil Engineering	SOE
CIE 520	Solid Wastewater Management	5	Civil Engineering	SOE
CIE 521	Hydrology	5	Civil Engineering	SOE
CIE 526	Environmental Remediation	5	Civil Engineering	SOE
CIE 563	Transportation Planning and Land Use	5	Civil Engineering	SOE
CIE 582	Infrastructures Management	5	Civil Engineering	SOE
CIE 600H	Groundwater Hydrology and Pollution	5	Civil Engineering	SOE
CIE 724	Air Quality Management	5	Civil Engineering	SOE
CIE 725	Geo-Environmental Engineering	5	Civil Engineering	SOE
CIE 730	Irrigation and Drainage Engineering	5	Civil Engineering	SOE
CIE 788	Fundamentals of GIS and Remote Sensing	5	Civil Engineering	SOE

* Student may not take both BIO 203 and BIO 331 for credit (either one).

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