



UPM IMPACT in SDG13

Climate Action

EELISA ACITIVITIES AROUND SDG13

International Seminar: Digitalization as Key Driver in the Steel Industry: Cases from some RFCS funded projects.

Description

During the seminars, basic information will be presented to the students, covering:

- Scientific basis of climate change

- Description of international/national/local frameworks for addressing climate emergency

- Key aspects on energy transition

- The role of economy (1/2): current conflicts, globalization.

- The role of economy (2/2): environmental economics, ecological economics, feminist economics.

Talks with invited experts will be scheduled.

For further details, see: <https://blogs.upm.es/actividadesacreditables/energia-economia-y-emergencia-climatica-c31034/>



OBJETIVOS DE DESARROLLO SOSTENIBLE



Community	Ethics, Social Commitment & Entrepreneurship		
Coordinator	cristobaljose.gallego@upm.es	ECTS	1,5
Kind of activity	Course / Seminar		
Principal SDG	SDG13 - Climate Action	Others SDG	
Starting date	2022-03-03	Ending date	2022-03-05
Target group	master bachelor	Teaching mode	In person
Link	https://community.eelisa.eu/?post_type=eelisa_activity&p=1218		



Archaeology&Architecture - Methodology and Perspectives on Mediterranean Cultural Heritage: Field Activity

Description

The purpose of the activity is twofold. On the one hand, its main goal is get the student concerned of the mission of the Green Planet Community. On the other hand, it is expected that the student can design a tool to further analyze the discourse both written and oral being used in the literature of issues related to the technology designed in the Green Planet Community. It is word stressing how relevant key concepts may become when they represent knowledge in the field and learn their implications in society.

Deliverables:

The student is required to first write a short description of the project stating a general goal as well as discussing the motivation for the project and short description of the technology used.A first version of the software tool is to be tested.The student should write a short description of the corpus of analysis and about the methodology to find out key concepts and the linguistics theory to learn about their semantics.A draft of the written document is to be submitted for revision.A final implementation of the software tool has to be designed. A written document of the Diploma Project is to be registered.Rehearsal on the Oral Presentation of the Diploma Project is to be prepared prior to its Dissertation to the board of teachers for assessment.

12ECTs, 300-350 hours

Community	Green Planet		
Coordinator	a.andrades@upm.es	ECTS	12
Kind of activity	Course / Seminar		
Principal SDG	SDG13 - Climate Action	Others SDG	
Starting date	2021-01-01	Ending date	2021-12-31
Target group	master bachelor	Teaching mode	In person
Link	https://community.eelisa.eu/?post_type=eelisa_activity&p=1231		



PROREMOTE- PROximity care in REMOTE areas: A multidisciplinary approach to proximity care in remote areas

Description

Main goals of the course:

Make participants aware of the importance of considering dimensions related to climate change when thinking about the city (in relation to urban regeneration) to fight the current climate emergency situation.

Create an interdisciplinary work environment. To do this, ETSAM students have developed joint activities with students of Political Sciences from the Autonomous University in Madrid, in relation to the issue of climate change and migration from a political-urban perspective. This allowed them to share their knowledge in urban planning and architecture with future professionals in the field (learners).

Put students in contact with reality and the cities where they will operate in the near future through their professional activities. To do this, students have analyzed some work areas proposed to them (Barrio de San Isidro and Mahou-Calderón area in Madrid) from a holistic perspective. Visits have been made to the mentioned area and it has been possible to interact with some neighborhood associations and AMPAs in the region, as well as individual citizens.

Community	Designing a Sustainable and Decarbonized University (DISCOVERY)		
Coordinator	sonia.degregorio@upm.es	ECTS	
Kind of activity	Course / Seminar		
Principal SDG	SDG13 - Climate Action	Others SDG	
Starting date	2021-01-01	Ending date	2022-12-31
Target group	master bachelor	Teaching mode	In person
Link	https://community.eelisa.eu/activities/aps-aula-de-resiliencia-urbana-regenerando-san-isidro/		



ARTIST - 5G/6G networks trAnsfoRming The dlgital SocieTy - Seasonal School in Pisa

Description

Teaching Innovation Project "Climate of Change" is part of the European Program "Development Education and Awareness Raising -DEAR- of the European Union and is led in Spain by Alianza por la Solidaridad (member of Actionaid).

Main goals of the course:

Make participants aware of the importance of considering dimensions related to climate change when thinking about the city (in relation to urban regeneration) to fight the current climate emergency situation.

Create an interdisciplinary work environment. To do this, ETSAM students have developed joint activities with students of Political Sciences from the Autonomous University in Madrid, in relation to the issue of climate change and migration from a political-urban perspective. This allowed them to share their knowledge in urban planning and architecture with future professionals in the field (learners).

Community	Designing a Sustainable and Decarbonized University (DISCOVERY)		
Coordinator	sonia.degregorio@upm.es	ECTS	
Kind of activity	Course / Seminar		
Principal SDG	SDG13 - Climate Action	Others SDG	
Starting date	2021-01-01	Ending date	2022-12-31
Target group	master bachelor	Teaching mode	In person
Link	https://community.eelisa.eu/activities/teaching-innovation-project-climate-of-change/		



HACKATHON EELISA Industrial Design for Human: Sustainable Communities

Description

Dear all,

my name is Sergio Alvarez, I work as assistant professor in the School of Civil Engineering (UPM). I have a wide experience in carbon footprint studies and I am very interested in sharing knowledge between partners.

I am currently working on a proposal for the joint call. It will be a course with the aim of quantifying EELISA's carbon footprint.

Please, anyone interested contact me (sergio.alvarez@upm.es).

Community	Designing a Sustainable and Decarbonized University (DISCOVERY)		
Coordinator	sergio.alvarez@upm.es	ECTS	
Kind of activity	Workshop		
Principal SDG	SDG13 - Climate Action	Others SDG	
Starting date	2022-09-01	Ending date	2023-07-31
Target group	master bachelor phd researcher educator	Teaching mode	Blended
Link	https://community.eelisa.eu/activities/eelisas-carbon-footprint-alliance/		



PhD Position- Organic and Perovskite solar cells in Erlangen at the Helmholtz (for Renewable Energy)

Description

The Climate Fresk is an innovative, efficient and accessible tool to understand the scientific bases underlying climate change. Based on the IPCC report, it explains the climate functioning and the consequences of its disruption. The workshop lasts three hours and is divided in three distinct phases. The first phase consists in discovering and linking the cards by cause-consequence relationships to build the Fresk as explained in the IPCC reports. The second phase is creative: the participants decorate the Fresk and choose a title. The last phase is a debrief enabling a discussion about players' feelings, positions, questions and both individual and collective solutions.

3 hours of Workshop and 27 hours of group work

Evaluation by means of student participation in the workshop and the completion of an exercise in group on the contents of the workshop and its application to campus ambit.

Community	Designing a Sustainable and Decarbonized University (DISCOVERY)		
Coordinator	francesca.olivieri@upm.es	ECTS	1
Kind of activity	Workshop		
Principal SDG	SDG13 - Climate Action	Others SDG	
Starting date	2021-01-01	Ending date	2021-12-31
Target group	all	Teaching mode	In person
Link	https://community.eelisa.eu/activities/climate-fresk/		



Course on "Introduction to Intra/Social/Entrepreneurship"

Description

The student will be introduced in the research world focusing on the development of more radiation-resistant materials to be part of future nuclear fusion reactors.

The project is divided into two part:

Experimental tasks:

Fabrication of nanostructured W coatings

Implantation of C, He and H in the fabricated nanostructured W coatings and in commercial coarse grained W samples

Characterization of the morphology and microstructure of the coatings prior to and after implantation by scanning electron microscopy (SEM) and X-ray diffraction (XRD), respectively.

Analysis by means of ion beam analysis (IBA) techniques of He and H concentration in nanostructured and in coarse grained W samples.

Data analysis

Use of different software for data analysis

The Master Thesis will be evaluated after being presented in front of a court formed by three teachers form the ETSII. The courts are random, hence, the members will not be known until the day of the defence.

To guide the procedure, evaluation rubrics will be used which are slightly different for each degree. The rubrics must be filled by both, the student and the tutor.

There are three different evaluation documents.

Report document: Evaluated by the tutor, student and court.

Process: Evaluated by the tutor and the students.

Oral presentation: Court



OBJETIVOS DE DESARROLLO SOSTENIBLE



Community	Advanced Materials for a Sustainable Future		
Coordinator	raquel.gonzalez.arrabal@upm.es	ECTS	
Kind of activity	Thesis		
Principal SDG	SDG13 - Climate Action	Others SDG	SDG 7 - Affordable & Clean Energy
Starting date	2021-01-01	Ending date	2021-12-31
Target group	master	Teaching mode	Blended
Link	https://community.eelisa.eu/activities/master-thesis-study-of-the-influence-of-grain-boundaries-in-coexistence-he-and-h-in-nanostructured-tungsten/		



HACK|BAY - a hackathon for everyone - challenge to IMPROVE CHILDREN'S RADIOLOGY EXPERIENCE

Description

Currently, we are at a crossroads in which, on the one hand, there is an exponential increase in the population, which leads to an increase in the demand for resources and the negative impact on the environment, and on the other, we achieve high development technological. For this reason, achieving a model of socially and environmentally sustainable development is essential for our survival. The great challenge we face as a society of the future is to increase food production and its quality while reducing the environmental impact of the production process. In this context, scientific knowledge of biodiversity, of the physiological processes of plants and their interaction with the environment, together with the best use of natural resources and technology, are key to achieving this.

The negative consequences of an irregular and changing climate on the environment, safety and health of human societies have been evident for years. The likelihood of irreversible changes on a global scale makes it urgent to address changes in agriculture to make it more efficient and sustainable. Therefore, consideration should be given to introducing more comprehensive changes both in the use of resources and in the diversification of production systems. Biotechnology research and its tools are no exception and must also adapt and reach all those places where it is needed.

Plants are sessile organisms that develop their life cycle in the same place and, therefore, their growth and reproduction depend on the environmental conditions to which they are exposed. In this context, their ability to adapt to these changes is guided by their genetic material, their biodiversity, developed numerous morphological, physiological and biochemical mechanisms that allow them to avoid and / or tolerate stressors and survive in adverse conditions.

In this sense, the Seed Banks, such as the Germplasm Bank of the UPM "César Gómez Campo", play a crucial role in contributing to the ex situ conservation of wild plant species and of wild relatives of cultivated species. However, they not only save plant biodiversity in the form of seeds or germplasms, but also provide ecogeographic information of the habitat where they were collected, allowing studies to be carried out in response to climate change with the geographic information system (GIS).

The development of "omics" technologies has allowed the advancement in the knowledge of genetic functions and the effect of the environment on the expression of genes responsible for adaptive responses. Based on these advances, several authors have reviewed, from both theoretical and experimental approaches, adaptation mechanisms in the context of climate change, establishing that plant biodiversity is the most efficient natural strategy. However, these



technologies are not available to everyone, as they require specific theoretical and practical knowledge.

Therefore, the general objective of this course proposal is to teach the application of molecular biology tools to the study of plant biodiversity of crops of agronomic interest. Specifically, there are two Didactic Units (UD), a theoretical one (12 hours) and another practical (16 hours). The practices will take place in the Biochemistry laboratories of the ETSIAAB Department of Biotechnology - Plant Biology, facilities equipped with the necessary equipment for their development. These tools will allow students from various countries to subsequently apply them professionally in their areas of origin. For example, it will allow the identification of plant varieties best adapted to drought in semi-arid areas and, therefore, adapted to climate change.

It will work with SDG 1, 4 and 17. But in a very specific way Goal 2: Zero hunger, Milestone 2.5. Goal 13: Climate Action, Milestone 13.3. Goal 15: Ecosystem life terrestrial. Milestone 15.5.

The specific objectives of Didactic Unit 1 (UD1) of Theory are:

Transfer of knowledge of the concepts

Community	Green Planet		
Coordinator	laura.pascual@upm.es	ECTS	3
Kind of activity	Course / Seminar		
Principal SDG	SDG13 - Climate Action	Others SDG	SDG15 - Life on Land SDG17 - Partnerships for the Goals SDG 2 - Zero Hunger SDG 4 - Quality Educatio
Starting date	2021-01-01	Ending date	2021-12-31
Target group	master bachelor	Teaching mode	In person
Link	https://community.eelisa.eu/?post_type=eelisa_activity&p=1235		



CESM – Circular Economy and Sustainability Management (Seasonal School) in Pisa

Description

This course is oriented to get to know the singularities of innovation projects, the cooperation in teams needed to promote them, the formation of consortia, the rules of the game of the main calls (Horizon Europe, Green Deal, Next Generation, Misiones, Life) As well as the role of the National Contact Points and evaluating Experts among others.

We also want to study the case of some EELISA projects and the “Smart, Green and Clean Neighbourhoods” Protocommunity specifically.

Main goals:

- Get to know the characteristics of innovation projects
- Get to know the current European and National calls
- Connect the learners to EELISA projects

Community	Designing a Sustainable and Decarbonized University (DISCOVERY)		
Coordinator	lola.storch@upm.es	ECTS	
Kind of activity	Course / Seminar		
Principal SDG	SDG13 - Climate Action	Others SDG	SDG17 - Partnerships for the Goals SDG 7 - Affordable & Clean Energy
Starting date	2021-01-01	Ending date	2021-12-31
Target group	master bachelor	Teaching mode	In person
Link	https://community.eelisa.eu/activities/actividad-verano-2022-el-papel-de-la-ingenieria-en-el-nuevo-marco-de-innovacion-europeo/		