

Master 2 Ecology and Sustainable Development Environmental Management and Sustainable Development (EMSD) 2022 - 2023

UNIVERSITÉ CATHOLIQUE DE L'OUEST

3 Place André Leroy, 49100 Angers

France

Program director:

Oihana LATCHERE (olatcher@uco.fr)

Remplacée jusqu'au 10 Octobre 2022 par Julie NEURY-ORMANNI (jneuryormanni@uco.fr)

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Récapitulatif des Unités d'enseignement

(Click on the title to follow the link towards teaching unity description)

Teaching Unity	Credits	Duration	CM	TD	TP
3UE14 – Environmental and urban law	4	45h	28h	17h	
3UE15 – Policy and economy of sustainable development	3	30h	18h	12h	
3UE16 – Geographic Information System	3	30h	15h		15h
3UE17 – Project management and ethics	3	27h	17h	10h	
3UE18 – Management of environmental risk	5	45h	20h	17h	8h
3UE19 – Industrial and territorial management	5	45h	10h	35h	
3UE20 – Environmental management	3	30h	16h	7h	7h
3UE21 – English	2	24h		24h	
1 UE pour FI/CA :					
3UE12 - CA – Experimental project	2	20h	10h	10h	
3UE13 – FI – Project in workplace	2	20h		20h	

Master's degree Biodiversity, Ecology, Evolution

Course Ecology and sustainable development

3UE14 – Environmental and urban law

General objectives

The purpose of environmental law is to protect the environment and create rules for the use of natural resources. Laws may regulate pollution, forest protection, mineral harvesting, the use of natural resources and animal populations. The environmental laws cover a wide range of topics such as air quality, water quality, contaminant cleanup, waste management, chemical safety or even animal and vegetal protection.

Environmental law: Right, Water, Air, Habitats, Landscapes, ICPE, Climate change

Urban law brings together laws, policies, decisions and practices to govern the management and development of the urban environment. The main objective is to create reforms and to overcome the pressing challenges of cities and urban systems.

Urban planning law: Right, National urban planning guidelines, territorial planning guidelines

Skill bloc

ECTS credits

Scientific skills

Final exam (3 ECTS) / Continuous assessment (2 ECTS)

Targeted skills

To analyze environmental law; To understand legal system, norms and legal vocabulary related to the environment and urbanism; To perform analysis on actual regulation in order to advise project leaders in environment, planning or urbanism; To manage the complex issues of urban development while reconciling the challenges of sustainable development.

Speakers

Ivano ALOGNA ivano.alogna@gmail.com

Arthur Watts Research Fellow in Environmental and Climate Change Law

British Institute of International and Comparative Law

Benjamin NORRITO benjamin.norrito@gmail.com

Urbaniste durable – SCALE

(Other speaker ?)

Part 1 : Urban planning in sustainable development context (B. Norrito)
12h of lectures and 4h of tutorials

- Environmental law : legal and regulatory context (international, European and French).
- Urban planning law: rules relating to the occupation of the ground and space, whether they relate to planning (national and local), authorization mechanisms individual (permits, declarations, etc.), or more broadly of development and equipment procedures (urban planning).

Type of continuous assessment Not determined

Part 2 : Focus on climate change law (I. Alogna)
8h of lectures and 6h of tutorials

The complexity of climate change and how it impacts France and global communities. Definition of core climate change terms such as « climate adaptation » and « mitigation ». The main legal components of the formal international law frameworks (i.e. UN Framework Convention on Climate Change, its Kyoto Protocol and the Paris Agreement). Climate action in EU and in France. The state of climate change litigation and the governing domestic legal framework to address climate change. The main legal mechanisms and principles of Climate Change Law.

Type of continuous assessment Every student will make a 15-minutes (20 max) presentation followed by a Q&A session. This will determine the final grade.

Part 3 :

Type of continuous assessment Not determined

Advised references

Décret n° 2016-1071 du 3 août 2016 relatif au schéma régional d'aménagement, de développement durable et d'égalité des territoires

Marcus, G., Siri, J., Gatzweiler, F., Dora, C., Aerts, J., Nandudu, S., ... & de Sá, T. H. (2022). Supporting a Healthy Planet, Healthy People and Health Equity through Urban and Territorial Planning. *Planning Practice & Research*, 37(1), 111-130.

Master's degree Biodiversity, Ecology, Evolution

Course Ecology and sustainable development

3UE15 – Policy and economy of sustainable development

General objectives

There are four interconnected dimensions to sustainable development : society, environment, culture and economy. Sustainable growth requires managing human-environment relationships. The main objective is to preserve natural resources while providing access to healthy food, energy, water and medicine for everyone. To this aim, international and national economic systems should integrate the growth of economy while taking into account global environmental issues. In this course, students will be learn about history and evolution of sustainable development. How the economical aspect of this concept is approached by corporate and national territory with the examples of the monetary valuation of the environment, responsible tourism, certification programs and low carbon strategy.

Skill bloc

Scientific skills

ECTS credits

Final exam (2 ECTS) / Continuous assessmant (1ECTS)

Targeted skills

To integrate principles of project management and tools of scientific analysis into effective environmental management ; To propose sustainable environmental policies by integrating biological, social, and management components; To understand the monetary valuation of the environment through methodological approaches; To understand the use of economic and regulatory instruments for environmental management.

Speakers

Carmen CANTUARIAS c.cantuarias@groupe-espi.fr

Environmental economist – Teacher/researcher ESPI2R/GREThA

Emmanuelle LAFOND emmanuelle.lafond@yahoo.fr

Lecturer in Sustainable Development

(Other speaker ?)

Part 1 : Natural capital Valuation and non-renewable resources (C. Cantuarias)

6h of lectures and 4h of tutorials

Methodological approaches to the monetary valuation of the environment, economic and regulatory instruments for environmental management. Economical instrument for biodiversity. Biodiversity law : Compensation natural site, ecosystemic services, economic incentives for ecological compensation. Social cost benefit analysis of new technologies in energy and water.

Type of continuous assessment Not determined

Part 2 : Sustainable Development in corporate and tourism (E. Lafond)

8h of lectures and 6h of tutorials

- Sustainable development (definition, objectives, threats, historical background)
- Multilateral agreements
- From Millenium Development Goals (MDGs) to Sustainable Development Goals (SDGs)
- Corporate Society Responsibility (CSR)
- Responsible tourism
- Certifications & Labels
- Study case : Sustainable tourism
- Videos and article studies about COP26 and environmental policies.

Type of continuous assessment Sulitest
Testimonials (Energy Efficiency in the Industrial Sector – Job position EY Consultant & Auditor in Sustainable development)

Part 3 :

Type of continuous assessment

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Course Ecology and sustainable development

3UE16 – Geographic Information System

General objectives

Geomatics (including geomatics engineering), also known as geospatial science (including geospatial engineering and geospatial technology), is the discipline of collecting, storing, processing, analysing, and delivering geographic information or spatially referenced information. It consists of data, products (software), services and specific tools involved in the collection, integration, analysis, and management of geographic data.

GIS has been defined by National Geographic as “a set of tools for the input, storage and retrieval, manipulation and analysis, and output of spatial data”¹. From a problem-solving perspective, GIS² may be considered as:

- a. a special-purpose digital database in which a common spatial coordinate system is the primary mean of storing and accessing data and information.
- b. an interoperable technology
- c. GIS can be thought “as a decision support system involving the integration of spatially referenced data in a problem-solving environment”

This course will explore, with a practical approach through study cases, geographic data types, concepts, tools, and examples of Geographic Information Systems for environmental applications.

Skill bloc

Digital tools

ECTS credits

Continuous assessment (3ECTS)

Targeted skills

To understand the domains of application of GIS for modelling, analysing, managing, and contributing to solve environmental issues.

To understand the role of GIS in the decision-making process in its domains of application.

Speaker

Carlos SALGUERO carlos.salguero@iclaves.fr

GIS consultant – ICLAVES

¹ <https://www.nationalgeographic.org/encyclopedia/geographic-information-system-gis/>

² Jacek Malczewski, GIS and multicriteria decision analysis, 1999

Geographic Information System (C. Salguero) 15h of lectures and 15h of practical classes

- GIS Overview
- Spatial Data Integration
- Spatial Data Representation
- Data editing
- Spatial Analysis
- Remote Sensing
- Spatial Decision Analysis and Modelling
- GIS for Environmental applications: study cases

Approach

- Lectures
- Videos
- Use of QGIS to represent geographic data and to implement analysis tools related to selected study cases

Type of continuous assessment Individual / group assignments

Internet and bibliographic research and presentation of GIS projects implementations and / or research studies on environmental issues.

Study cases using QGIS

Advised references

GIS for Environmental Applications, Zhu, Xuan, 2016, Routledge, Taylor and Francis (available in the UCO's library of the Angers campus)

Optional additional references:

GIS, Environmental Modelling and Engineering, Allan Brimicombe, 2010, Taylor & Francis Group

GIS and Environmental Monitoring, Applications in the Marine, Atmospheric and Geomagnetic Fields, Stavros Kolios and alt., Springer, 2017

Geoinformatics and Modelling of Landslide Susceptibility and Risk, An RS & GIS-based model building approach in the eastern Himalaya, Sujit Mandal & Subrata Mondal, Springer, 2019

Environmental Modelling with GIS and Remote Sensing, Andrew Skidmore, Taylor & Francis, 2002

GIS for Environmental Decision-Making, Andrew Lovett & Katy Appleton, Taylor & Francis, 2008

GIS for Environmental Applications, A practical approach, Xuan Zhu, Routledge, 2016

Environmental Remote Sensing and GIS in Iraq, Ayad M Fadhil Al-Quraishi & Abdelazim M. Negm, Springer, 2019

ArcGIS for Environmental and Water Issues, William Bajjali, Springer, 2018

Spatial Modeling in GIS and R for Earth and Environmental Sciences, Hamid Reza Pourghasemin Candan Gokceoglu, Elsevier, 2019

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3UE17 – Project management and ethics

General objectives

The environmental project management needs some human relationship skills to communicate with stakeholders and ethically helping to decision. In this course, you will learn about project management: definitions, diversity, stakes. But in a project, a leadership should know how to manage people, constituting, animating and interviewing the project team with self-awareness, listening to others, conflict management. In terms of communication, he/she manage the pilotage with appropriate team tools. He/she assesses the financial profit of the ratio environment/cost. The aim of this course will be to understand ethic decision process and how to implement transversally the environment in that ethical decision making.

Skill bloc

Professional skills

ECTS credits

Continuous assessmant (2ECTS)

Targeted skills

To communicate and negotiate; To ensure and effectively manage human relations and professional contacts with stakeholders in the environmental field; To manage the means, tools and channels of interactive communication; To manage the different stages of a project; To lead a project and assess its challenges; to facilitate a meeting; To know how to use decision-making ethics tools.

Speakers

Henry DICKS henrydicks@gmail.com

Researcher specialist in environmental philosophy

Maryse Matta marysematta@gmail.com

Associate executive coach and development leadership animator – Papillon MDC

Part 1 : Leadership development (M. Matta) 11h of lecture and 8h of tutorials

Project management in terms of deliverables and client expectations, schedules, budgets, teams and stakeholders. Elements of project management, the technical: Management the doing and Leadership, human, the being.

Self-awareness, behaviour, active listening, beliefs and perspective. How to constitute and manage a team, crisis and conflict.

Tutorials will be based on simulations and case studies.

- Type of continuous assessment**
- Individual grade 50%: reflection on case study or simulation
 - Group assignment 50%: analysis and oral presentation of a case.

Part 2 : Ethic decision (H. Dicks) 6h of lecture and 2h of tutorials

Ethic decision process: six different perspectives for ethical decision making (rights, justice, utilitarianism, common good, virtue and care). Key positions in environmental ethics (from anthropocentrism to ecocentrism) and how to integrate the environment into the previous perspectives. In the seminars, you will do group exercises around two topics: the reintroduction of wolves to national parks and the ecological restoration of disused quarries.

- Type of continuous assessment** Evaluation will be of oral presentations on the seminars topics carried out in groups.

Advised references

Catherine Larrère, "Ce que sait la montagne" (2013)

<https://laviedesidees.fr/Ce-que-sait-la-montagne.html>

Brown University, "A Framework for Making Ethical Decisions"

<https://www.brown.edu/academics/science-and-technology-studies/framework-making-ethical-decisions>

Santa Clara University, "A Framework for Ethical Decision Making"

<https://www.scu.edu/ethics/ethics-resources/a-framework-for-ethical-decision-making/>

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3UE18 – Management of environmental risk

General objectives

The management of environmental risk includes a multidisciplinary approach to describe potential hazards and impacts on the environment, to evaluate the risk of occurrence and to identify precautions to reduce the risks. Student will work on a project to determine microplastic composition, colours and shape in samples from Loire.

Skill bloc

Scientific skills

ECTS credits

Final exam (3 ECTS) / Continuous assessment (2CTS)

Targeted skills

To analyze an environmental risk and to identify risk reduction scenarios (preservation, treatment or restoration of environments); To manage the tools and evaluation methods for the analysis of environmental risks; To acquire knowledge of international regulations on environmental risks.

Speaker

Barbara RETHORE barbare.rethore@uco.fr / contact@natexplorers.fr

Biologist – Scientist mediator – Natexplorers

Maureen BERG mb95@brighton.ac.uk

Teacher-researcher at Brighton University, England

Amélie CHATEL achatel@uco.fr

Course Manager « Ecology and sustainable development UCO master »

Organisms Biology, Stress, Health, Environment Laboratory (BIOSSE)

Oihana LATCHERE olatcher@uco.fr

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3UE19 – Industrial and territorial management

General objectives

A sustainable city is an urban unit which promotes sustainable development and urban ecology including social, economic, environmental, and cultural contexts. This course focuses on the importance of ecology and sustainable development in cities and industries through case studies, site visits and projects. The course also focuses on enhancing the well-being of citizens through green building/industries and the varying degrees of interactions between natural resources and urban development planning. Students will be exposed to the various practices used to reduce the impact of building on human health and the environment during a building's lifecycle (design, construction, operation, maintenance, and removal). This course also explores ways to minimize energy consumption to preserve the environment.

Skill bloc

Scientific skills

ECTS credits

Final exam (3 ECTS) / Continuous assessment (2 ECTS)

Targeted skills

To propose sustainable environmental management policies by integrating biological, social and management components ; To understand the challenges of industrial and territorial management in the context of sustainable development; To understand the importance of promoting the use of natural resources for industrial and territorial development; To use industrial ecology and strategic management concepts to pursue the Sustainable Development Goals

Speaker

Benjamin NORRITO benjamin.norrigo@gmail.com

Sustainable urbanist – SCALE

Innovation Academy : Virtual conference

Oihana LATCHERE olatcher@uco.fr

Course Manager "Environmental Management and Sustainable Development" (M2 Ecology and sustainable development UCO)

Organisms Biology, Stress, Health, Environment Laboratory (BIOSSE)

Part 1 : Sustainable development in Freiburg 20h of tutorials

Webinar on the city of Freiburg : environmental approach and a political and civic commitment to sustainable development, energy efficiency meets social sustainability, sustainable urban development in different districts.

Type of continuous assessment Written test (2h)

Part 2 : Sustainable development in urban management (B. Norrito) 6h of lectures and 7h of tutorials

Sustainable city : smart city, circular city, urban decline

Territorial strategy : diagnostic, observatory, service offer – Case study of sustainable development urban project.

Eco-responsibility in the city : management and treatment of water, waste management, contaminated soil, atmospheric emissions, biodiversity in the city, active mobility.

Type of continuous assessment 2 A3 posters by group + oral presentation

Part 3

Type of continuous assessment

Advised references

<https://www.asla.org/climatepolicies.aspx>

https://uwe-repository.worktribe.com/preview/1054129/Biodiversity_human_health_post_print.pdf

<https://world-habitat.org/world-habitat-awards/winners-and-finalists/twelve-urban-ecology-projects-in-hedebygade/>

<http://www.guerrillagardening.org/>

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3UE20 – Environmental management

General objectives

In the context of sustainable development, the environmental management is a big subject starting from the understanding and diagnostic of the environment to the establishment of coherent action protecting the environment or health. This course will take place in two part.

The first part will focus on Health, Environment and Safety (HES) performance and Corporate Social Responsibility (CSR). These laws, regulations and guidelines have become significant issues for industry and corporate, leading them to deploy an appropriate CSR strategy. The course will approach the case study in a corporate and another one about ICPE-Seveso for chemical substances and mixes.

The second part will focus on The river Loire valley. It has become a UNESCO World heritage location and contains different "Natura 2000" European sites. This course focuses the Loire Valley and some of the tributaries to facilitate the understanding of biodiversity conservation and ecological management. It includes the characteristics of the river Loire such as the variability of the flow, flooding periods, some of the animal and vegetal life but also natural habitats, in the water, on the sand banks or on the river banks. The course will also contain examples of disturbance and restoration along the river, in the hydraulic annexes or in other parts of the river basin. On the occasion, some examples of architectural spots along the river will also be added as point of interest for nature conservation.

Skill bloc

Scientific skills

ECTS credits

Continuous assessment (3ECTS)

Targeted skills

To manage CSR and environmental assessment in order to make a sustainable commitment in a responsible approach; To understand the key/fundamental principles of CSR, its challenges and its constraints; To be aware of the meaning of CSR diagnosis in business; To manage issues involving the environment in a changing world (climate, water, biodiversity and energy change); To put in place strategies to conserve energy, water, biodiversity, landscapes and resources and to reduce negative impacts on the environment; To integrate principles of project management and tools of scientific analysis into effective environmental management.

Speaker

Thierry ROLLAND Thierry.ROLLAND@ademe.fr

Ingénieur thématique / Déchets des Activités Economiques

Jean-Baptiste Tissier jb@magrandeforet.fr

CSR & Development MaGrandForêt

Guillaume Delaunay g.delaunay@parc-loire-anjou-touraine.fr

Chef du Service Biodiversité et Paysages - Parc Naturel Régional Loire-Anjou-Touraine (PNRLAT)

Head of department « Biodiversity and landscapes » - Regional Nature Park Loire-Anjou-Touraine (RNPLAT)

Marie Fortin fortinmarie@yahoo.fr

Freshwater biologist - Fédération de la Sauvegarde de l'Anjou

Part 1 : CSR & ESG (Jean-baptiste TISSIER) 4h of lecture

The definitions and practical aspects of ESG/CSR. How industries and corporates manage it and develop strategies appropriate to their actions. The CSR communication for team and consumers. Case study of HSE and CSR establishment in corporate.

Type of continuous assessment None

Part 2 : HSE + ICPE SEVESO (T. Rolland) 4h of lecture, 2h of tutorials

Environment Protection Classified installations (ICPE) and SEVESO site definition in relation with HES in terms of work security. Accidentology in the activity sector with BARPI database (Industrial Risks and Pollution Analysis Office). A case study of ICPE activity in France and SEVESO sites for chemical substances.

Type of continuous assessment Written test

Part 3 : Nature conservation management on the river Loire (G. Delaunay) 4h of lecture, 3h of tutorials and 4h of practical classes

Presentation of Regional Nature Park with the example of Loire-Anjou-Touraine. How to manage UNESCO World Heritage location. Case study of Loire Environnement in European Program for Nature conservation (Natura 2000 areas : SPA (Special Protection Area) and SAC (Special Area of Conservation)).

Ecological course about flora and habitat types in the river Loire valley.

Tutorials will treat different management subject such as invasives, disturbances and restoration, wetlands and RAMSAR and troglodytes habitats.

A fieldtrip will bring concrete observation of Loire management.

Type of continuous assessment Technical report : in group of 2 or 3, Students submit a **Short Scientific Paper** of less than 5 pages including pictures, keywords, executive summary and scientific references.

They have *usually* one month to produce this work in group. I collect it in mid-november.

Part 4 : Ecological approach of river Loire (M. Fortin) 4h of lecture, 3h of tutorials and 2h of practical classes

River typology : focus on the river Loire (definition of the watershed, structure and fonctionnality of a lotic system, hydromorphological dysfunction, restauration of the Loire)

Hydromorphological diagnosis : scales, ecological zonation, method to apprehen habitat quality, exemple of restauration of fish habitat

Fish and bioindication : sampling protocol and calculation of the Fish Based Index (FBI)

Ecological continuity : how to restaure it, Fmigratory fish as bioindicator.

Fieldtrip on the Loire valley (restoration project).

Tutorials will treat different management subject such as invasives, disturbances and restoration, wetlands and RAMSAR and troglodytes habitats.

A fieldtrip will bring concrete observation of Loire management.

Type of continuous assessment 4-sheet synthesis about ecological continuity management of Seine, Garonne, Adour and Rhône basins in pair.

Master's degree Biodiversity, Ecology, Evolution

Course Ecology and sustainable development

3UE21 – English

General objectives

The importance of communication in today's corporate world is undeniable. With 2 billion speakers worldwide, English is the largest language by the number of speakers. Many worldwide corporations require a certain level of English to certain job roles and career progression. Moreover, the vast majority of scientific documents are written in English. Improving your English skills is therefore necessary both to build your professional project and to access scientific knowledge related to ecology and sustainable development.

Skill bloc

Knowledge transfer

ECTS credits

Continuous assessment (2ECTS)

Targeted skills

To be able to present a personal or a group project in english; To produce and analyze english documents.

CI

Certification

Speaker

Nicholas LEWIS fishcomm@hotmail.com

English (N. Lewis) 24 hours tutorials

The English course aims at allowing students to work five of the traditional language skills (written and oral comprehension, written and oral expression, and oral interaction) through various media (articles, documentaries, audio and video documents, graphics, etc.) and different activities (understanding, written expression, role plays, debates, oral presentations ...).

- Type of continuous assessment**
- Paired oral presentations
 - Written expression project

Advised references

- 'A silent Spring' - Rachel Carson. - 1962
- 'A silent spring revisited' - Conor Mark Jameson - 2013
- 'The Routledge Handbook for European Integration' – Thomas Hoerber
- 'Sapiens' – A Brief History of Humankind – Yuval Noah Harari
- 'The Hidden Life of Trees' – Peter Wohlleben – 2015
- 'Eating Animals' – Jonathan Safran foer - 2009

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3UE12 - CA – Experimental project

For students without apprenticeship

General Objectives

The aim of this course is to propose a relevant experimental project on sustainable development subject by using UCO as a playground. Students will work on project in ecological transition of BiOSSE laboratory and UCO. Students will work in group. They will be supported during personalised tutorials with referent teacher for project building (topic, actions preparation, communication, creation). Students will have a semester to realize this project and will be assessed on a poster presentation in front of Biology and environment Department of UCO.

Skill bloc

Professional skills

ECTS credits

Continuous assessment (2ECTS)

Targeted skills

To lead professional or research project within the university related to Sustainable Development and/or environment ; To be able to communicate about the project ; To be able to select appropriate communication tools.

Speakers

Amélie CHATEL achatel@uco.fr

Course Manager « Ecology and sustainable development UCO master »

Organisms Biology, Stress, Health, Environment Laboratory (BIOSSE)

Oihana LATCHERE olatcher@uco.fr

Course Manager « Environmental Management and Sustainable Development » (M2 Ecology and sustainable development UCO)

Organisms Biology, Stress, Health, Environment Laboratory (BIOSSE)

Julie NEURY-ORMANNI jneuryormanni@uco.fr

Substitute course Manager « Environmental Management and Sustainable Development » (M2 Ecology and sustainable development UCO)

Organisms Biology, Stress, Health, Environment Laboratory (BIOSSE)

12h d'accompagnement

Choose a topic for 19th of September 2022. Propose a research scientific project or a responsible action plan adapted to UCO or and BIOSSE laboratory needs. Create and realize an experimental project from A to Z. The project should be finished in December.

Type of continuous assessment

Poster + présentation

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Course Ecology and sustainable development

3UE13 – FI – Project in workplace

For students in apprenticeship

General objectives

The functioning of corporate professional activity has to take into account environmental and social aspects. The principle aim of this teaching unit is to propose an animation around sustainable development in a corporate. They will be supported during personalised tutorials with referent teacher for project building (topic, actions preparation, communication, creation). Students will have a semester to realize this animation and will be assessed in the set up and the communication about this animation (photos, number of participants ...).

Skill bloc

Professional skills

ECTS credits

Final exam (2 ECTS) / Continuous assessment (1ECTS)

Targeted skills

To conduct a project related to sustainable development within a company; To be able to communicate about the project ; Select the appropriate communication tools.

Speakers

Amélie CHATEL achatel@uco.fr

Course Manager « Ecology and sustainable development UCO master »

Organisms Biology, Stress, Health, Environment Laboratory (BIOSSE)

Oihana LATCHERE olatcher@uco.fr

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Organisms Biology, Stress, Health, Environment Laboratory (BIOSSE)

24h de TD

Students get until mid-October to find their animation's topic.
Identify corporate needs to propose an adequate animation.
Communicate around the animation project with appropriate tools.
The animation should take place in December.

Type of continuous assessment Animation presentation (Photo report)