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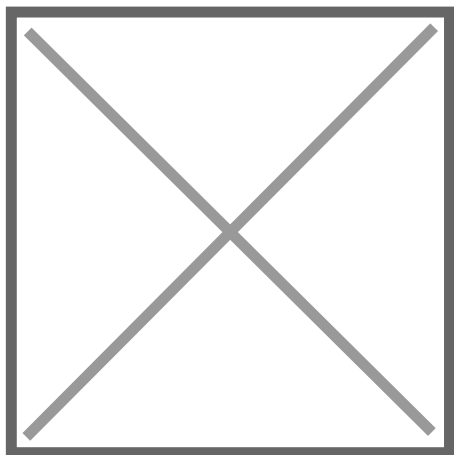
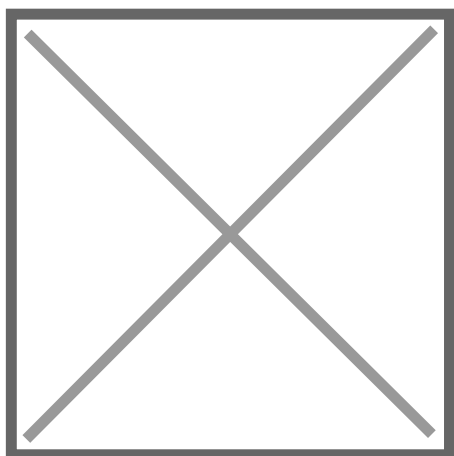
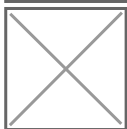
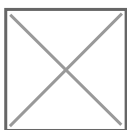
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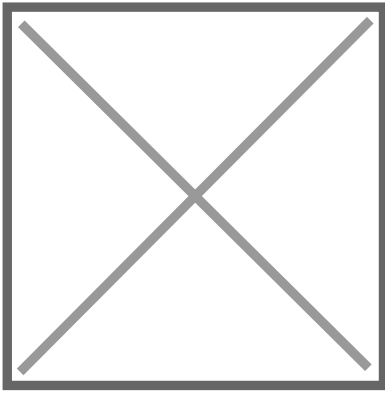
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Le mail de partage a bien été envoyé.

Ajouter au comparateur

M2 Climate, land use and ecosystem services





Master

Mention Agros sciences, Environnement, Territoires, Paysage, Forêt

Régime(s) d'inscription

Formation initiale Formation continue

Langue(s) d'enseignement

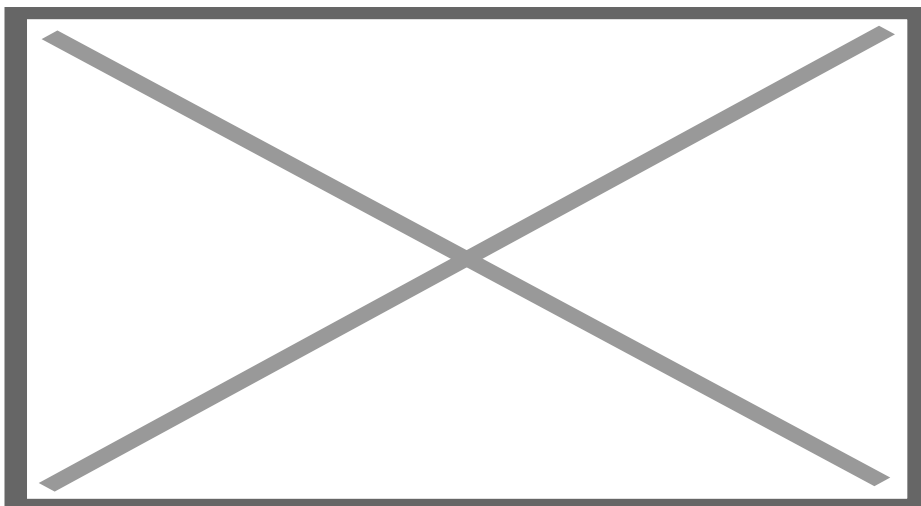
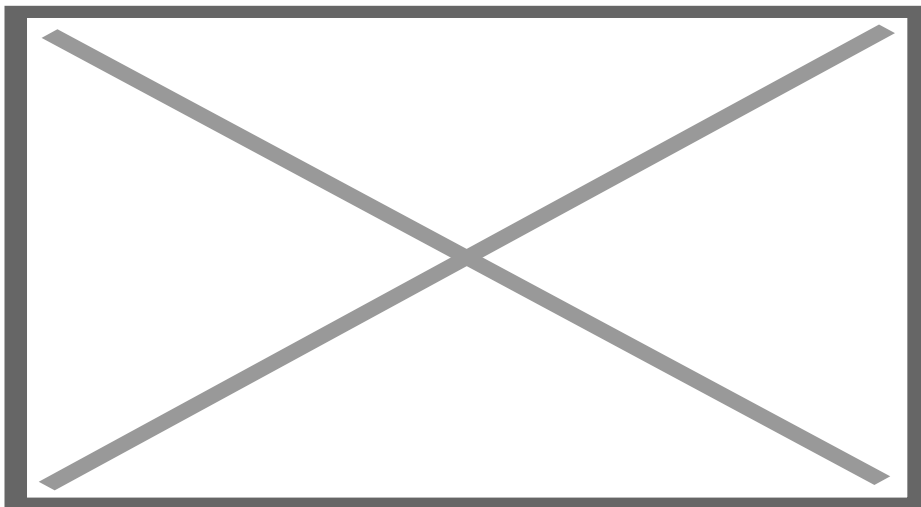
Anglais

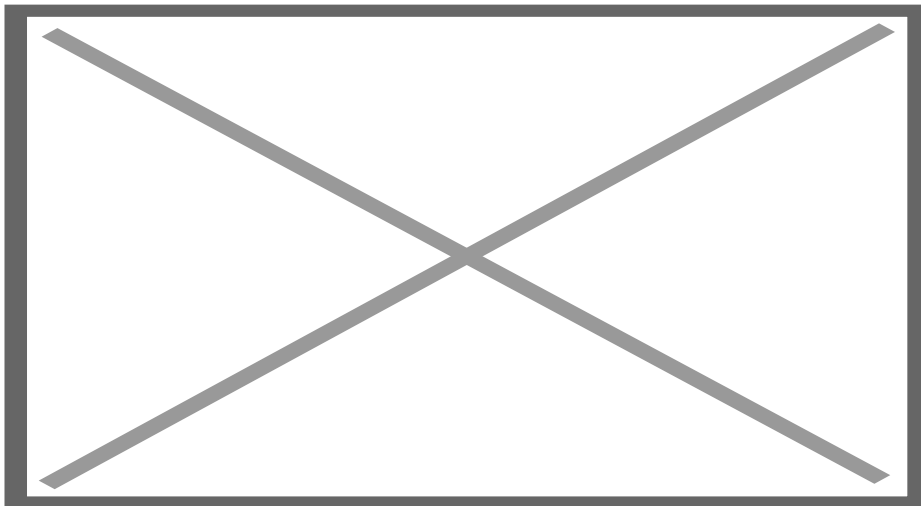
Climate, Land Use and Ecosystem Services (CLUES)

Le master est organisé par un premier semestre apportant les compétences, connaissances et savoir-faire, suivi d'un second semestre en situation dans un stage donnant lieu à la rédaction d'un mémoire et d'une soutenance.

[Télécharger la fiche détaillée](#)

[Je candidate](#)





■ ■

Informations

- [Présentation](#)
- [Admission](#)
- [Programme](#)

Présentation

Compétences

Les cours favoriseront les approches intégrées grâce à un programme multidisciplinaire combinant les sciences naturelles, les sciences sociales et économiques et des cours avancés en gestion, analyse et modélisation des données afin de promouvoir le développement durable dans les zones rurales et semi-urbaines.

Objectifs pédagogiques de la formation

Ce parcours vise à donner aux étudiants les bases scientifiques nécessaires à la compréhension et l'évaluation des évolutions des agro et écosystèmes sous l'effet des changements de climats, et des changements des usages des surfaces continentales. Pour intervenir de manière optimale, ces spécialistes doivent avoir une bonne connaissance i/ des interactions physiques et biologiques entre le climat et la biosphère, ii/ des méthodes d'évaluation des services rendus par les agro et écosystèmes, et iii/ mettre en œuvre et évaluer des leviers d'action pour agir sur l'utilisation des surfaces, dans une perspective de développement durable des territoires et secteurs économiques concernés. Le caractère pluridisciplinaire de ce master donne des clés pour se saisir des questions touchant aux changements globaux. A l'issue de cette formation les étudiants auront acquis :-les bases scientifiques pour comprendre les interactions biosphère-atmosphère-des savoir-faire sur l'évaluation des services écosystémiques fournis par les (agro) écosystèmes en développement des capacités-d'analyse et de simulation (statistiques, modélisation, analyse spatiale et temporelle, ...) et d'intégration et de synthèse de système complexe (multi acteurs, pluridisciplinaire, à différentes échelles d'espaces et de temps)-la gestion des projets des territoires L'originalité de ce parcours est de s'intéresser à l'ensemble des échelles d'espace et de temps pertinentes pour ces questions, et de fournir un cadre holistique pour concevoir et évaluer des stratégies d'adaptation et de mitigation par rapport aux changements globaux.

Débouchés

Professionnels

Après Master + Doctorat : chercheur ou enseignant-chercheur

Après un master : Chargé(e) d'études

Services agricoles, environnement ou développement durable, aménagement des collectivités ou services de l'Etat

Organisations et associations de développement agricole ou de protection/conservation de la nature

Bureaux d'études spécialisés dans l'évaluation des impacts environnementaux

Entreprises du secteur privé, dont production agricole

Tarifs et bourses

Les montants peuvent varier selon les formations et votre situation.

- [Plus d'information sur les tarifs](#)
- [Plus d'informations sur les bourses](#)

Agenda

Début de la formation (date indicative)

01/09/2026

Fin de la formation (date indicative)

01/10/2027

Admission

Capacité d'accueil

Places

22

Public visé et prérequis

Connaissances sur les interactions biosphère-climat d'un point de vue biologique et physique.

Période(s) de candidature

Plateforme Inception

Du 02/02/2026 au 15/06/2026

Pièces justificatives

Obligatoires

Classement Année Précédente et taille promotion.

Lettre de motivation.

Ce document doit être en anglais

Liste des autres masters demandés (hors Saclay).

Projet professionnel.

in English

Tous les relevés de notes des années/semestres validés depuis le BAC à la date de la candidature.

Attestation de niveau d'anglais.

Any documents that certify a "B2 or upper" level or equivalent in English (CEFR)

Curriculum Vitae.

In English

Facultatives

Coordonnées référents (obligatoire pour les candidats non internationaux).

Lettre de recommandation d'un maître de stage.

Attestation de français (obligatoire pour les non francophones).

Niveau B1 : étudiants non-francophones, attestation délivrée par les services de l'Ambassade de France ou par un organisme de formation linguistique français; les étudiants ayant validé un diplôme en langue française sont dispensés de cette attestation

Descriptif détaillé et volume horaire des enseignements suivis depuis le début du cursus universitaire.

Dossier VAPP (obligatoire pour toutes les personnes demandant une validation des acquis pour accéder à la formation) <https://www.universite-paris-saclay.fr/formation/formation-continue/validation-des-acquis-de-lexpérience>.

Fiche de choix de M2 (obligatoire pour les candidats inscrits en M1 à l'Université Paris-Saclay) à télécharger sur <https://urlz.fr/i3Lo>.

Document justificatif des candidats exilés ayant un statut de réfugié, protection subsidiaire ou protection temporaire en France ou à l'étranger (facultatif mais recommandé, un seul document à fournir) :

- Carte de séjour mention réfugié du pays du premier asile
- OU récépissé mention réfugié du pays du premier asile
- OU document du Haut Commissariat des Nations unies pour les réfugiés reconnaissant le statut de réfugié
- OU récépissé mention réfugié délivré en France
- OU carte de séjour avec mention réfugié délivré en France
- OU document faisant état du statut de bénéficiaire de la protection subsidiaire en France ou à l'étranger.

Programme

UE à choix

Matières	ECTS	Semestre	Cours	TD	TP	Cours- TD	Cours- TP	TD- TP	A distance	Projet	Tutorat
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Nature-based
solutions to
substitute fossil
resources and
address global
change

3

Semestre 2 12

6

6

6



Nature-based solutions to substitute fossil resources and address global change

ECTS : 3

Semestre calendaire : Semestre 2

Détail du volume horaire

Cours magistraux : 12

Travaux pratiques : 6

Travaux dirigés : 6

Projet : 6

Langue d'enseignement

Anglais

Enseignement à distance

non

Prérequis

None

Programme / plan / contenus

1. Introduction to course content and assignment (individual work on topics related to the subjects taught in the course). Overview of energy, economic, environmental and policy issues related to nature-based solutions. Environmental benefits and drawbacks, as well as current bottlenecks to their deployment. NBS examples around the world (3h lecture – B. Gabrielle).
2. Basics of agricultural biomass feedstock production and supply
 - Photosynthesis : principles and regulations ; pedo-climatic drivers and constraints for biomass productivity ;(3h practical on photosynthesis measurements on various crops in Grignon – S. Saint-Jean).
 - Designing cropping systems to produce biomass (input rates, growing cycles, technical constraints, multi-criteria assessment) ; Biomass quality constraints and management for various conversion routes (3 h lecture – C. Loyce + field tour of lignocellulosic crops in Grignon).
3. Green chemistry – biorefineries to produce fuels, chemicals and biomaterials in lieu of petrochemical alternatives (S. Baumberger ; 3h lecture)
4. Urban vegetation and its role in regulating local climate and mitigating air pollution (P. Stella, 3h lecture)
5. Flood mitigation and control with green rooftops (E Berthier, CEREMA) : lecture and a tour of the Saclay plateau emphasising novel NBS in the construction, water treatment and transport sectors.
6. Environmental assessment of bio-based products (Flipped class + 2h practical – B. Gabrielle)

Urban vegetation for sustainable cities

ECTS : 3

Semestre calendaire : Semestre 2

Détail du volume horaire

Cours magistraux : 12

Travaux dirigés : 12

Langue d'enseignement

Anglais

Enseignement à distance

non

Programme / plan / contenus

1. Trends of urbanisation worldwide
2. Impacts of urbanisation on urban microclimate and air quality
3. Mitigation of these impacts by urban greening strategies

Objectifs d'apprentissage

Nowadays, more than half of the world's population resides in cities, a proportion that can reach over 80% in developed countries. However, cities and urbanisation, due to the artificialization of land surfaces, cause numerous changes (e.g., urban heat islands, water runoff, and flooding).

In order to make cities more sustainable and livable for their populations, particularly in the context of climate change (rising temperatures, more intense rainfall events), the greening of urban spaces is developing for many reasons, including improving the thermal insulation of buildings, reducing or delaying the flow of rainwater collected on roofs, and helping to mitigate the urban heat island effect as well as assessing the urban air quality.

The objectives of this course are to provide knowledge on how urban greening strategies can mitigate the deleterious effects of urbanisation and assess the comfort and health of citizens.

Nature de l'évaluation

Evaluation Continue non Intégrale



Understanding and managing soil organic matter for ecosystem services delivery

ECTS : 2

Semestre calendaire : Semestre 1

Détail du volume horaire

Cours magistraux : 17.5

Travaux dirigés : 8.5

Projet : 3

Langue d'enseignement

Anglais

Enseignement à distance

non

Prérequis

Basics in soil science (including biogeochemistry),
agronomy, environmental sciences.

Programme / plan / contenus

Soil organic matter has a pivotal role in soils and terrestrial ecosystem, it is a major component of soil fertility, soil structure and water holding capacity, it is the energy resource of soil organisms and thus sustains biodiversity, buffers contaminants and it is a major reservoir of carbon. It is thus at the crossroads of societal challenges: maintaining food security, mitigating greenhouse gas emissions and climate change, adapting to climate changes, recycling organic wastes and protecting biodiversity. This course aims to provide knowledge concerning soil organic matter, its functions and contributions to ecosystem services, its dynamics at different time scales and variations under management practices. It aims to provide tools to survey and manage soil organic matter and to increase C storage in soils.

Objectifs d'apprentissage

The aim of this course is to provide students with basic knowledge of the dynamics of organic matter in soils, to understand how to study and characterise it, and to make proposals for its management. Emphasis will be placed on the biogeochemical processes involved in the formation of organic matter and the methods available for studying its characteristics (e.g. different degrees of residence time). Environmental and social aspects will also be addressed

Organisation générale et modalités pédagogiques

The course will be divided into four major parts:

- Fundamentals of soil organic matter dynamics and stabilization processes in soils. C sequestration in

Climate

Matières	ECTS	Semestre	Cours	TD	TP	Cours- TD	Cours- TP	TD- TP	A distance	Projet	Tutorat
Climatic system- Introduction to atmospheric dynamics and energetics	3	Semestre 1	20	8							

Climatic system- Introduction to atmospheric dynamics and energetics

ECTS : 3

Semestre calendaire : Semestre 1

Détail du volume horaire

Cours magistraux : 20

Travaux dirigés : 8

Langue d'enseignement

Anglais

Enseignement à distance

non

Programme / plan / contenus

Know and understand the fundamental exchanges that take place at the **land-atmosphere interface**. Know and understand the **global cycles of water, carbon, nitrogen, and phosphorus** at the global scale, as well as the variables that influence these cycles. Know and understand why the terrestrial biosphere can influence the composition and circulation of the overlying air masses.

The course will be divided into three major parts :

Fundamentals in the biogeochemical cycles and surface-atmosphere exchanges at the global scale (15h)

Directed work concerning the analyses and discussions of results coming from simulations of the global change model.

A more research-driven part that will make the best use of the science in progress to illustrate what we know, what the unknowns are, what and where the uncertainties are, and what remains to be done concerning **the biogeochemical cycles and the two-way interactions between biosphere and atmosphere** at the global scale (9h). This part will be handled by experts through conferences.

Objectifs d'apprentissage

Fundamental skills in biosphere atmosphere interactions at the global scale

Organisation générale et modalités pédagogiques

1. An overview of radiative processes affecting the global climate. Links with past climates.
2. From radiative to radiative-convective equilibrium: the role of stratification in climate energetics.
3. The different scales of atmospheric dynamics: application to cloud generation.
4. Climate stability and climate feedbacks: the role of

Matières	ECTS	Semestre	Cours	TD	TP	Cours- TD	Cours- TP	TD- TP	A distance	Projet	Tutorat
Biosphere- Atmosphere interactions at local scale	3	Semestre 1	12	6	12						



Biosphere-Atmosphere interactions at local scale

ECTS : 3

Semestre calendaire : Semestre 1

Détail du volume horaire

Cours magistraux : 12

Travaux pratiques : 12

Travaux dirigés : 6

Langue d'enseignement

Anglais

Enseignement à distance

non

Prérequis

Basic knowledge in bioclimatology and data processing

Programme / plan / contenus

This course aims to further students' understanding of the **interactions between the biosphere and the atmosphere** at a fine scale (plants, leaves, canopies), as well as their modelling and measurement. Those interactions are key to understanding the functioning of the biosphere and (agro) ecosystems, as well as assessing the impact of climate change on agriculture.

Objectifs d'apprentissage

- Understanding, modelling, and measuring the interactions between the biosphere and atmosphere at fine scales (plants, leaves, ...).
- Plant-Ecosystem-Atmosphere Interactions
- Mass and Energy transfer between plants, soil and atmosphere within the atmospheric boundary layer (energy budget, water transfer, evaporation, CO₂ exchange, pollution and GES emission (a)biotic particles transfer)

Organisation générale et modalités pédagogiques

Courses, Directed work and field trip

Modalités pédagogiques particulières

Evaluation/assignment Report concerning directed work about Data analysis of plant-Atmosphere Interactions/fluxes - Bibliographic summary - Attendance and participation to the course will also be accounted for the final grading.

Bibliographie

Matières	ECTS	Semestre	Cours	TD	TP	Cours- TD	Cours- TP	TD- TP	A distance	Projet	Tutorat
<u>Biogeochemical cycles and surface- atmosphere exchanges and interactions : global scale</u>	4	Semestre 1	30	15							



Biogeochemical cycles and surface-atmosphere exchanges and interactions : global scale

ECTS : 4

Semestre calendaire : Semestre 1

Détail du volume horaire

Cours magistraux : 30

Travaux dirigés : 15

Langue d'enseignement

Anglais

Enseignement à distance

non

Prérequis

Atmospheric circulation, plant functioning (ecophysiology).

Programme / plan / contenus

The course will be divided into three major parts :

Fundamentals in the biogeochemical cycles and surface-atmosphere exchanges at the global scale (15h)

Directed work concerning the analyses and discussions of results coming from simulations of the global change model.

a more research-driven part that will make the best use of the science in progress to illustrate what we know, what the unknowns are, what and where the uncertainties are, and what remains to be done concerning the biogeochemical cycles and the two-way interactions between biosphere and atmosphere [at global scale] (9h).

This part will be handled by experts through conferences.

Objectifs d'apprentissage

- Know and understand the fundamental exchanges that take place at the land-atmosphere interface.
- Know and understand the global cycle for water, carbon, nitrogen, phosphorus at the global scale, and the variables that influence their cycles.
- Know and understand why the terrestrial biosphere can influence the composition and circulation of the overlying air masses.

Nature de l'évaluation

Evaluation Continue non Intégrale

Land-use

Matières	ECTS	Semestre	Cours	TD	TP	Cours- TD	Cours- TP	TD- TP	A distance	Projet	Tutorat
<u>Agronomy for global issues</u>	3	Semestre 1	14	6							

Agronomy for global issues

ECTS : 3

Semestre calendaire : Semestre 1

Détail du volume horaire

Cours magistraux : 14

Travaux dirigés : 6

Apprentissage autonome : 6

Langue d'enseignement

Anglais

Enseignement à distance

non

Prérequis

Basic knowledge in agronomy and statistics

Programme / plan / contenus

During this class, students will get: (i) an overview of relevant methodologies for research in agronomy for global issues with a focus on meta-analysis and yield gap analysis; (ii) some insights into the past trends of some major drivers of the global food system (global crop production, harvested area and yields of major food crops); (iii) knowledge on major production systems worldwide, (iv) knowledge about the relationship between agriculture and biodiversity at the global scale, (v) knowledge about nutrients flows linked to agricultural activities at the global scale, with a focus on organic farming upscaling, and (vi) knowledge about relationships between agricultural systems and pests and diseases at large scale. Major open global data sources will be presented, and two of them (FAOSTATS and the Global Yield Gap and Water Productivity Atlas) will be used during tutorial classes to perform some calculations and simple statistics analyses (with R or Excel software).

Objectifs d'apprentissage

Agronomists play a crucial role in addressing global challenges within the context of a rapidly growing global population, changing diets, and the need to reduce the environmental footprint of agriculture. The objectives of this class are (i) to acquire knowledge about agricultural systems at the global scale in terms of production and its relationships with the environment and food security, and (ii) to present the methods used by agronomists to address these global issues.

Organisation générale et modalités pédagogiques

The evaluation is based on a group evaluation. Students will be asked to form groups of 3 to 7 (depending on the

Matières	ECTS	Semestre	Cours	TD	TP	Cours- TD	Cours- TP	TD- TP	A distance	Projet	Tutorat
Public policy for climate and environmental regulation	1	Semestre 1	18								
■											

Public policy for climate and environmental regulation

ECTS : 1

Semestre calendaire : Semestre 1

Détail du volume horaire

Cours magistraux : 18

Langue d'enseignement

Anglais

Enseignement à distance

non

Prérequis

Basics in biosphere-atmosphere exchanges (environmental physics, plant ecophysiology)

Nature de l'évaluation

Evaluation Continue non Intégrale

[Land-use engineering for the provision of climate and environmental services](#)

3	Semestre 1	12	3	9
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Land-use engineering for the provision of climate and environmental services

ECTS : 3

Semestre calendaire : Semestre 1

Détail du volume horaire

Cours magistraux : 12

Travaux pratiques : 9

Travaux dirigés : 3

Langue d'enseignement

Anglais

Enseignement à distance

non

Prérequis

Basics in land-use / climate interactions and agronomy

Programme / plan / contenus

Land-use and ecosystem management are key components of the environmental footprint of local communities, whether urban or rural. It encompasses impacts within and outside the geographical boundaries of these communities, because demand for ecosystem services may have consequences on distant countries through product imports or indirect market-related effects. Thus, designing and assessing strategies that minimise this footprint at product, citizen, or community levels requires a thorough understanding of the human, ecosystem, and environmental responses involved in the underlying scenarios, from local to global scales. These responses can be analysed using biophysical models of ecosystem functioning and the Earth/climate system, as well as economic models that describe the market mechanisms by which local demand may translate into global consequences for the use and management of land worldwide. The objectives of this course are to raise students' awareness of the biophysical and economic processes involved in the response of land-use and climate to economic drivers, and to equip them with state-of-the-art knowledge on modelling these processes across a range of scales. Case studies involving the models will illustrate how they can be used to design and assess low-carbon strategies. The course will comprise lectures, practicals, and conferences from international experts (in approximately equal shares).

Objectifs d'apprentissage

Upon successful completion of course, students will :

gain a basic knowledge of soil functioning and response

Matières	ECTS	Semestre	Cours	TD	TP	Cours- TD	Cours- TP	TD- TP	A distance	Projet	Tutorat
Ecology under climate change	3	Semestre 1	18	12							
■											

Ecology under climate change

ECTS : 3

Semestre calendaire : Semestre 1

Détail du volume horaire

Cours magistraux : 18

Travaux dirigés : 12

Langue d'enseignement

Anglais

Enseignement à distance

non

Programme / plan / contenus

1. Fundamentals of ecology under climate change
2. Soil microbial ecology, soil C and N cycling under climate change
3. Impact of global change on terrestrial ecosystems
4. Current issues on ecology and climate change

Objectifs d'apprentissage

The objectives of this course are to raise students' awareness of the effects of climate change on biodiversity and the functioning of ecosystems, as well as the ecosystem services they deliver, and to gain insight into the relationships between biodiversity and ecosystem functioning under climate change. On completion of this course, students will:

1. Master the basics of functional ecology,
2. Be aware of the relationships between climate change drivers and the evolution of biodiversity and ecosystems, as well as the nature-based solutions that can mitigate climate change.
3. Develop their literature research and teaching skills in the field of ecology.

Organisation générale et modalités pédagogiques

Lectures and tutorials led by working groups on specific topics in ecology under climate change complement those covered during lectures.

Nature de l'évaluation

Evaluation Continue non Intégrale

Matières	ECTS	Semestre	Cours	TD	TP	Cours- TD	Cours- TP	TD- TP	A distance	Projet	Tutorat
<u>Integrated assessment of ecosystem services and sustainability</u>	4	Semestre 1	12	6							

Integrated assessment of ecosystem services and sustainability

ECTS : 4

Semestre calendaire : Semestre 1

Détail du volume horaire

Cours magistraux : 12

Travaux dirigés : 6

Langue d'enseignement

Anglais

Enseignement à distance

non

Prérequis

Basic knowledge (at Bachelor's level) in ecology, biogeochemistry and agronomy.

Programme / plan / contenus

The course aims to raise students' awareness of environmental management, the ISO 14000 standards, and the principles of their implementation in various decision-making contexts, with the goal of improving the environmental performance of production systems or organisations. The course will equip students with the tools and methods currently used in the environmental assessment of products and services, as well as their eco-design. Life-cycle assessment, whose use is currently spreading across all economic sectors for purposes of eco-design, consumer information, or policy design, will occupy a central place in pedagogy.- Background on environmental management; organisation- and product-oriented approaches.- Operation of an environmental management system (EMS) at in organizations : key concepts and implementation principles- Applications in various industrial sectors: eco-design and environmental information- Conceptual framework of industrial ecology and impact assessment methods ; connections with the ecosystem services framework- Life-cycle assessment : ISO standards 14040 to 14044, steps of the method in theoretical and practical terms (system definition, inventory, impact characterization, normalization)- Application to food products, and practical work highlighting the connection of environmental management with the ecosystem services framework.

Objectifs d'apprentissage

- Knowledge of the principles of environmental management, and their application to various decision-making contexts (industry, agriculture, and for public policies)- Ability to perform a life-cycle assessment of a

Matières	ECTS	Semestre	Cours	TD	TP	Cours- TD	Cours- TP	TD- TP	A distance	Projet	Tutorat
Everyone Eating Well within Environmental Limits	3	Semestre 1	21	6							
■											

Everyone Eating Well within Environmental Limits

ECTS : 3

Semestre calendaire : Semestre 1

Détail du volume horaire

Cours magistraux : 21

Travaux dirigés : 6

Langue d'enseignement

Anglais

Enseignement à distance

non

Prérequis

Global agronomy course (Clues)

Land use and ecosystem services course (Clues)

Programme / plan / contenus

1. Introduction on global challenges to food security and the environment
2. How to use the planetary boundaries approach
3. Regeneration and restoration
4. Connection with human diets and food policies
5. The role of business

Objectifs d'apprentissage

Understanding and modelling the connections between agriculture, food security, poverty, planetary boundaries, and the role regenerative agriculture and industries can play

Modalités pédagogiques particulières

Sequence relocated to Montpellier or La Rochelle, lectures, tutorials and field trips to understand the relationship between agriculture and biodiversity.

Nature de l'évaluation

Evaluation Continue non Intégrale

Integrative project

Matières	ECTS	Semestre	Cours	TD	TP	Cours- TD	Cours- TP	TD- TP	A distance	Projet	Tutorat
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4 Semestre 6 12
2



Stage de fin d'études

[illegible]

CLUES Internship

ECTS : 23

Semestre calendaire : Semestre 2

Langue d'enseignement

Anglais

Enseignement à distance

non

Prérequis

Defence and Master's Thesis in English. An internship can be completed in any language.

Programme / plan / contenus

Internship can be conducted in the laboratories of the Master, such as EcoSys Joint Research Unit (INRA/AgroParisTech), Agronomy Joint Research Unit (INRA/AgroParisTech), Laboratoire des Sciences du Climat de l'Environnement (LSCE ; UVSQ/CNRS/CEA), CIRED (CIRAD/CNRS/AgroParisTech), Institut d'écologie et des sciences de l'environnement de Paris (IEES ; UPMC/CNRS/IRD), UR HBAN, Antony (IRSTEA).

Additionally, students will be encouraged to find their own internships in various domains, including agriculture, the agro-food industry, and audit and consultancy firms, with a focus on environmental and sustainable development issues within the topics of the three main pillars of the master CLUES. Public administrations (municipalities, regional authorities, national governments) are also a possible target, as are international organisations (FAO, the World Bank, or international research bodies such as the Agricultural Research Partnership CGIAR).

Objectifs d'apprentissage

Internships are designed to place students in professional settings. Objectives are to apply and strengthen scientific and technical skills in a professional environment and develop interpersonal skills. This internship and the Master's thesis enable students to identify and clarify a problem or issue by applying the theories and methods acquired through their undergraduate and graduate studies. The Thesis and his oral defence must follow the formal thesis requirements, follow scientific standards, and be written in a clear and grammatically correct manner.

Modalités pédagogiques particulières

The internship subject must be a primary research and/or

Matières	ECTS	Semestre	Cours	TD	TP	Cours- TD	Cours- TP	TD- TP	A distance	Projet	Tutorat
Modelling concepts and applications	3	Semestre 2	3	10	3						



Modelling concepts and applications

ECTS : 3

Semestre calendaire : Semestre 2

Détail du volume horaire

Cours magistraux : 3

Travaux pratiques : 3

Travaux dirigés : 10

Projet tutoré 30

Langue d'enseignement

Anglais

Enseignement à distance

non

Programme / plan / contenus

Formalise a scientific problem, and draft of a code to solve a scientific problem, design and scheme of an algorithm

Objectifs d'apprentissage

- Formalise a scientific problem, design a system, and provide an algorithm to solve it while implementing it with a computer language
- Answer a scientific question by building a model

Compétences

Algorithmic thinking

Problem-solving

(Coding)

Nature de l'évaluation

Evaluation Continue non Intégrale

Lieu(x) d'enseignement

PALAISEAU

Contact(s)

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CLUES M2

Responsables de Formation CLUES

<http://www.universite-paris-saclay.fr/formation/master/agrosciences-environnement-territoires-paysage-foret/m2-climate-land-use-and-ecosystem-services>