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EDGE exchange scheme 2017-2018

The University of Liège (ULg), the University of Economics of Bratislava (EUBA) and Sciences Po in Paris are proud to announce the EDGE Exchange Scheme, a mobility grant scheme under the Environmental Diplomacy and Geopolitics (EDGE) project funded by the European Union. The scheme facilitates the exchange of undergraduate and graduate students between both universities during the academic years 2017-2018, 2018-2019 and 2019-2020. This information sheet contains all information regarding the exchanges during the academic year 2017-2018.

Duration

Students from ULg can apply to spend **one semester** at Science Po or EUBA, either the fall semester (August 2018- December 2018) or the spring semester (January 2019 – May 2019). Students from Science Po can apply to spend the **full academic year** at ULg or EUBA (September 2018- June 2019).

Grant

Students selected for the exchange scheme will receive a monthly allowance of **€700**. Students from ULg and Sciences Po will receive the regular Erasmus mobility grant on top of this allowance.

Selection procedure

Two students per year from EUBA can spend a semester at Sciences Po or ULg. Two students per year from Sciences Po can spend a full academic year at EUBA or ULg. Two students per year from ULg can spend a semester at EUBA or Sciences Po. As the EDGE exchange scheme is part of the Erasmus programme, students need to be enrolled at their home institution during the time of the exchange.



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Students who aspire to participate in the exchange scheme have to submit a CV and motivation letter - in English. The motivation letter should elaborate on the student's background (if any) regarding environmental matters – either professional or academic – as well as the role the exchange scheme and its specific courses could play in the student's academic and professional development.

For masters students that wish to apply to Sciences Po, the deadlines are by **May 15th, 2019** to be considered for the autumn semester and by **October 31th, 2018** to apply for the spring semester. PhD students that wish to go to Sciences Po can apply until **January 2019** for short term mobilities (3 months).

For PhDs and Masters students that wish to apply to EUBA, the deadlines are for both fall and spring semesters **May 15th, 2019**.

Applications should be send to Ms. **Luka De Bruyckere** (Luka.debruyckere@ulg.ac.be).

Annual summer school in Liège (Ulg)

Students enrolled in the exchange scheme have the opportunity to attend the annual summer school of the EDGE project. The 2018 summer school will be held at the University of Liège in September.

EDGE Courses

Each student enrolled in the exchange scheme will have to attend a minimum of 3 courses selected from the below list and acquire a minimum of 15 ECTS.

EDGE Certificate

Students who attend EDGE courses at their home institutions and at the host institution for a minimum of 30 ECTS will receive an EDGE Certificate at the completion of their 30 ECTS.

Contact

For more information, feel free to contact

Ms. Luka De Bruyckere

Research Assistant
The Hugo Observatory
University of Liège
Luka.debruyckere@ulg.ac.be



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ELIGIBLE EDGE COURSES

University of Liège

Fall semester

Introduction to natural hazards

Teacher(s): Pierre Ozer

Language of instruction: French

Location: Sart-Tilman, building B11, TP 1/12

Number of ECTS: 3

Fall semester,

Bloc course: 2 days of lecture

Natural hazards threatening the earth: an introduction to what they cost and how they can be reduced.

Course specification: <http://progcours.ulg.ac.be/cocoon/en/cours/RISQ2000-2.html>

Schedule: The 12th and 19th of December, from 9:30AM to 12:30PM.

Environmental management (eco-management)

Teacher(s): Joseph Smitz

Language of instruction: French

Location: HEC Management School (Liege)

Number of ECTS: 3

Fall semester

The course will lead the student to enlarge and strengthen his vision of a world where environmental and natural resources issues will play a more and more important role. The topics which are analyzed will provide to the student the elements and skills that are necessary



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to meet the challenges that he will be facing as a responsible actor (citizen, consumer, member of an organization or company), at the strategic level as well as on a daily basis.

The course is an introduction to the principles and methods of environmental management: historical evolution of public awareness - principles of ecological approach - ecosystems dynamics - biogeochemical cycles - functions of the environment - factors of degradation - main issues (climate, ozone layer, biodiversity, ...) state of the environment - objectives of environmental policy - principles used (polluter-pays, precaution, ...) - the instruments (legal, technological, economic, ...) for environmental management - evolution of environmental policies - sustainable development.

The last chapter is dedicated to the relation between enterprises and the environment: factors who determine the environmental policy of enterprises, the methods used to integrate the environmental issues, the environmental management systems (ISO14000, EMAS).

In parallel to the course, conferences are organized: environmental managers of industrial companies will explain the environmental issues they are facing and the solutions adopted.

More information: <http://progours.ulg.ac.be/cocoon/en/cours/GEST3047-1.html>

Schedule: this class is not organized in 2017-2018

Principes et méthodes de gestion environnementale

Teacher(s): Joseph Smitz

Number of ECTS: 5

Language of instruction: French

Fall semester

Location: HEC Management School(Liège)

*Missing course description. Please contact Joseph Smits in case of questions
(J.Smitz@ulg.ac.be)*

More information: <http://progours.ulg.ac.be/cocoon/cours/GCER0093-1.html>

Schedule: Tuesdays and Thursdays from 6:00PM to 9:00PM

Climates of intertropical and subtropical regions

Teacher(s): Matthias Vanmaerck

Number of ECTS: 3



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Language of instruction: French
Location: Sart Tilman, building B11, Macar

Fall semester

The course focuses (5 lessons of 2 hours) on specificities and diversity of inter and subtropical climates. It especially insists on atmospheric circulation, characteristics of one or several rainy seasons and their movement during the year, obstinacy of dry seasons, location of the cyclonic areas and characteristics and seasons of the tropical cyclones. The location of desert zones and their consequences on the extent of the œcumène are just like analysed than the deficiency marked in instrumental data for most part of the intertropical zone counting nevertheless for 40 % of the surface of the planet.

More information: <http://progcours.ulg.ac.be/cocoon/cours/ GEOG0030-1.html>

Schedule: The 29/11, 6/12, 13/12 et 20/12 from 1:30PM to 4:30PM

Politique de l'environnement et du territoire

Teacher(s): Sophie Hanson
Language of instruction: French
Location: Sart Tilman, building B31, Mahaim

Number of ECTS: 5
Fall semester

Le cours appréhende le domaine environnemental au sens très large. Une partie est consacrée au territoire et une autre à l'environnement (politiques transversales et sectorielles). Leur mise en œuvre concrète, par l'étude de leur traduction juridique, est à chaque fois examinée. Pour chaque partie (territoire et environnement) il s'agit de partir de l'analyse des politiques élaborées à l'échelon européen pour ensuite en étudier l'application dans le système fédéral belge et, plus spécifiquement en Région wallonne.

Ainsi, la politique territoriale de l'Union européenne est étudiée pour ensuite examiner la façon dont elle est transposée en Région wallonne. Ensuite, la traduction de ces politiques dans les textes juridiques est examinée ce qui conduit à une étude des différents outils de planification et des régimes d'autorisations (le permis d'urbanisme et le permis d'urbanisation). Cette partie s'achève par une séance dédiée à la résolution de cas concrets.

Une autre partie propose une analyse de plusieurs thématiques importantes de la politique de l'environnement, qu'elles soient transversales et sectorielles. Il s'agit des établissements classés (directive EID et permis d'environnement), des évaluations des incidences sur l'environnement, de l'information et la participation du public, des sols, etc. A nouveau, le contexte politique et juridique européen est étudié préalablement à sa mise en œuvre en Région wallonne.

Enfin, des acteurs de terrain sont invités afin d'exposer la mise en œuvre pratique de ces législations.

L'enseignement est organisé chaque année, sauf pour les étudiants de masters en sciences politiques qui ne peuvent le suivre que les années impaires (2015-2016, 2017-2018...).





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More information: <http://progours.ulg.ac.be/cocoon/cours/SPOL2209-3.html>

Schedule: Friday from 1:30PM to 4:30PM

Combating desertification

Teacher(s): Pierre Ozer

Language of instruction: French

Location: Sart-Tilman, building B11, TP 1/12

Number of ECTS: 2

Fall semester

Le cours abordera les processus de désertification en analysant de manière détaillée ses causes, ses conséquences, et les moyens de lutte. Il s'attardera sur les difficultés rencontrées lors de la mise en œuvre de projets de lutte contre la désertification dans les pays en développement.

Le cours est divisé en plusieurs parties:

- Processus de désertification : historique, contexte et définitions.
- Analyse passée et future des facteurs principaux menant aux processus de désertification, avec un focus sur la zone sahélienne : Variations climatiques et pressions anthropiques.
- Conséquences de la désertification : pauvreté, développement, santé.
- Actions de lutte contre la désertification à différentes échelles spatiales : local, national, régional, global.
- Coûts et perspectives de la lutte contre la désertification.

More information: <http://progours.ulg.ac.be/cocoon/en/cours/ENVT2019-1.html>

Schedule: The 16th and 23rd of October from 9/30AM to 12:30PM

Ecosystèmes : états, impacts anthropiques et gestion

Teacher(s): Célia Joaquim-Justo

Language of instruction: French

Location: Arlon

Number of ECTS: 4

Fall semester

This course aims at presenting the stress caused by mankind on the biosphere. After an introduction which provides a perspective of the changes ecosystems have been through on the different times scales of the planet, the evolution in time and space of each biomes/ecosystem is considered after our species emerged on the earth. The possible management approaches to





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solve the most problematic changes and their various implications for both human societies and the environment are also considered.

More information: <http://progcoours.ulg.ac.be/cocoon/en/cours/ENVT3045-1.html>

Schedule: **Tuesday 3/10**; Tuesday 10/10; Tuesday 17/10; Monday 13/11; Thursday 30/11; Tuesday 5/12; **Wednesday 13/12**; **Thursday 14/12**. From 9:30AM

In red, compulsory attendance. The others are group sessions that could be organized in Liege or from home.

Etude d'impact environnemental : applications dans les pays en développement

Teacher(s): Alain Hanson
Language of instruction: French
Location: Arlon

Number of ECTS: 2
Fall semester

Missing course description. Please contact Alain Hanson in case of questions (Alain.Hanson@ulg.ac.be)

More information: <https://www.programmes.uliege.be/cocoon/en/cours/ENVT0028-1.html>

Schedule: 7, 8 and 15th of December all day. Evaluation through public restitution of a group project, Friday, the 22th of December from 1:30PM to 5:30PM.

Integrated approach to environmental issues

Teacher(s): Fabien Claude, Dorothee Denayer, Marie Gérard, Corentin Hecquet, François Melard, Julien Minet, Stéphane Monfils, Anne-Claude Romain, Nathalie Semal, Fouad Zouhir
Language of instruction: French
Location: Arlon

Number of ECTS: 4
Fall semester

The seminar aims to cover the multiple facets posed by environmental issues and to respect its contradictions.

The aim is to open the field of environmental questioning in term of its "integrated" character, i.e. by giving equal space to each of its protagonists. The seminar is centred around case studies. It aims to make the student aware of interdependence, but also the contradictions which can



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exist between different facets (scientific, technical, regulatory, socio-economic) of an environmental issue. It aims to address specific information on an environmental issue, i.e. information of a heterogeneous, fragmented and incomplete nature.

The seminar is based on articulating skills through group and individual work.

More information: <http://progcours.ulg.ac.be/cocoon/en/cours/ENVT0010-1.html>

Schedule: from the 23rd to the 27th of october, and from the 6th to the 10th of November from 9:00AM to 5:00PM

Sustainable development:

Introduction to sustainable development & Ecological transitions theory and management

Teacher(s): Corentin Hecquet, Pierre M. Stassart **Number of ECTS:** 6
Language of instruction: French **Fall semester**
Location: Arlon

The course consists of two separate components: *Introduction to sustainable development* and *Ecological transitions theory and management*. It is possible to include only one component in the student's curriculum.

More information: <http://progcours.ulg.ac.be/cocoon/en/cours/ENVT0046-2.html>

The component *Introduction to sustainable development* introduces to sustainable development in four stages:

1. Major challenges: - climate change - biodiversity - food
2. The concept of development and the way to sustainable development: conceptual and historical aspects
3. Three dilemmas of sustainability: - prevention/precaution – non-renewable resources: preserve or substitute

More information: <http://progcours.ulg.ac.be/cocoon/en/cours/ENVT0846-2.html>

Schedule: 28th to 30th of october, from 9:30AM to 16:30PM

The component *Ecological transitions theory and management* will be taught during one full week at the ULg campus in Arlon (185 av Longwy, old building, council room).



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More information: <http://progcourses.ulg.ac.be/cocoon/en/cours/ENVT0040-2.html>

Schedule: 16th to 18th of october, from 10:00AM to 17:00PM

Economy, energy and environment

Teacher(s): Henry-Jean Gathon, Axel Gautier, Michel Hermans, Julien Jacomin
Number of ECTS: 2
Fall semester
Language of instruction: French
Location: Arlon

This course is conducted collegially by four teaching staff from the economics department. It consists of 4 parts each lasting four to seven hours, and each with a different theme:

- *Market instruments and environmental fiscality* (N. DE ZOTTI): this part of the course highlights the "tools" used by firms to persuade households and companies to adopt behaviour which is more appropriate for the protection of the environment. The advantages of market instruments (taxes, grants, delivery of negotiable permits) in terms of other policies such as the decision to impose direct constraints will be demonstrated. The decision to adopt environmental fiscality (eco-taxes, carbon taxes, ...) will be discussed and the reasons for delivering negotiable permits with the objective of minimising the costs of reducing polluting emissions will be explained.
- *The economy of natural resources* (A. GAUTIER): this part of the course focusses on price setting, stock management, exhaustion of resources, extinction of species and sustainable development. The economic problems linked to natural renewable resources (fish, forests) and non-renewable resources (oil, minerals) will be discussed.
- *Transport and the environment* (H.J. GATHON): this part of the course focusses, from the economic science point of view, on the links between transport and the environment. More specifically, the explanatory factors of demand and the characteristics of the offer of transport will be briefly analysed. This will be followed by a few action plans in the sector with a view to achieving the best allocation possible of resources and the guarantee of sustainable growth.
- *Energy policy* (M. HERMANS): this part of the course will address the problem of climate change based on choices made by governments between fossil fuels and renewable energies. Initially, demographic development will be analysed as an important cause of climate change, highlighting the cases of China and India. Secondly, the choice between fossil fuels and renewable energy as made by different governments will be presented, focussing on the availability of energy resources for





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each country and the geopolitical situation of these resources. Thirdly, an analysis of major energy consumers and major polluters will be tackled, considering the consequences for the environment. Finally, a presentation of the methods of slowing down pollution of fossil energies, focussing on the difficulty of a simple and cheap solution while highlighting a future full of choices and a relatively higher cost for various consumers, as well as the lack of decisions taken by governments when faced with this dilemma.

More information: <https://www.programmes.uliege.be/cocoon/cours/ECON0945-1.html>

Schedule: 4th, 12th and 15th of December from 9:30AM to 16:30PM

Environmental law

Teacher(s): Michel Delnoy

Language of instruction: French

Location: Sart-Tilman

Number of ECTS: 6

Fall semester

Environmental law is a young discipline which is rapidly developing. It is no longer possible to ignore the practical repercussions of this domain. It affects a wide range of actors, from companies and public bodies themselves down to individual citizens and it covers a wide range of subjects. By means of illustration, take recent European legislation on, among other things, energy performance of buildings, cleaning polluted land, environmental offences, environmental sanctions and environmental responsibility. The youth and rapid development of the field makes it difficult to learn about for a lawyer wanting to embark on a career in this field, whether as a lawyer, judge, company lawyer, civil servant, environmental advisor, member of an environmental group, etc. The aim of this course is to present a structural overview of the subject.

After having defined the contours of environmental law, the course will initially retrace the subject's historical roots and present the elements which differentiate it from other fields of law. We will particularly look at concepts such as "common heritage", "sustainable development", "integration", "participation", "precaution" etc.

This introduction will be followed by three large sections:

- the actors in environmental law: international, European, Belgian and Walloon bodies, associations, individuals etc. ;
- the instruments of environmental law: permits, plans, regulations, principles, sanctions, access to information, participation, education, access to justice, etc.;
- the fields of action of environmental law: protection of flora and fauna, protection of the air and climate, fight against noise, classified establishments, cleaning polluted land etc.





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Although the course is as far as possible constantly updated to take account of the numerous legislative and regulatory modifications that constantly change the face of this legal field, it will mainly cover the principles and general and common rules, which remain constant.

This course requires a bachelor in law

More information: <http://progcours.ulg.ac.be/cocoon/en/cours/DROI0960-1.html>

Schedule: Thursdays from 1:30PM to 3:30PM, building B31, Séminaire 6

Spring semester

Urban morphology and environmental integration

Teacher(s): Jacques Teller

Language of instruction: French

Location: Sart-Tilman

Number of ECTS: 5

Spring semester

L'approche générale du cours est d'aborder le territoire et le paysage comme une ressource à valoriser dans le cadre du projet urbain. Il s'agit de prendre en considération les structures territoriales héritées et l'environnement dans ses composantes visuelle et sociale.

Le paysage est ici vu comme un champ d'intervention spécifique pour l'architecte et l'urbaniste, au travers une participation à des travaux d'étude d'incidence paysagère.

Au terme de cet enseignement, les étudiants : 1- maîtrisent les notions de morphologie urbaine, à l'échelle de la ville et du territoire, et d'intégration paysagère (forme urbaine, relation d'une ville ou d'un noyau rural à son site, développement contemporain des paysages périurbains). 2- sont en mesure d'appliquer ces notions à l'analyse intégrée d'un territoire, dans la perspective d'une intervention ou de l'intégration d'un projet dans un paysage existant.

More information: <https://www.programmes.uliege.be/cocoon/en/cours/ARCH2003-1.html>

Schedule: Mondays from 8:30AM to 12:30PM

Political science and environment



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Teacher(s): Catherine Fallon
Language of instruction: French
Location: Sart-Tilman

Number of ECTS: 2
Spring semester

This course introduces to political sciences and to political analysis of environmental questions.

1. Concepts: politics, policy and polity
2. Life cycle of policies
3. Political actors in the environmental field
4. Environmental policies and their frames of reference
5. Environmental administration

More information: <http://progours.ulg.ac.be/cocoon/en/cours/SPOL2341-1.html#>

Schedule: Fridays from 2:00PM to 4:00PM

Biodiversity and ecodevelopment

Teacher(s): Pascal Poncin
Language of instruction: French
Location: Aquarium-Muséum

Number of ECTS: 2
Spring semester

Biological basis on biodiversity, ecology, ecodevelopment and examples of wildlife management.

More information: <https://www.programmes.uliege.be/cocoon/cours/ENV0008-1.html>

Schedule: Tuesdays from 9:30AM to 12:20PM

Migration and displaced persons

Teacher(s): François Gemenne
Language of instruction: French
Location: Sart-Tilman

Number of ECTS: 2
Spring semester

Missing course description. Please contact François Gemenne in case of questions (f.gemenne@ug.ac.be)

More information: <http://progours.ulg.ac.be/cocoon/en/cours/RISQ2025-1.html>



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Schedule: Tuesdays 1:30AM to 6:00PM

Conflict Management, Land Problem and Environment

Teacher(s): Philippe Lebailly
Language of instruction: French

Number of ECTS: 5
Fall semester

Location: Louvain la Neuve

Based on case studies, the seminar analyses the changes affecting the agricultural and rural world in general and the political issues linked to these changes. Conflict situations engendered by the changes in production mode and consumption habits are considered in an interdisciplinary framework.

There is a particular focus on resource management and on the specific dimension of land issues in agrarian dynamics.

More information: <http://progcours.ulg.ac.be/cocoon/en/cours/ECON2257-1.html>

Schedule: Tuesday afternoons on four weeks.

Emergency and crisis planning in developing countries

Teacher(s): Pierre Ozer, Nicolas Tuts, Sébastien Van Bellegem

Number of ECTS: 4
Spring semester

Language of instruction: French

Location: missing

Missing course description. Please contact Pierre Ozer in case of questions (pozer@ulg.ac.be)

More information: <http://progcours.ulg.ac.be/cocoon/en/cours/RISQ2023-1.html>

Schedule: missing

Governance, resilience and adaptation



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Teacher(s): Dominique Perrin, Gautier Pirotte
Language of instruction: French
Location: Sart Tilman

Number of ECTS: 3
Spring semester

Missing course description. Please contact Dominique Perrin in case of questions (dominique.perrin@gmail.com)

More information: <http://progours.ulg.ac.be/cocoon/en/cours/RISQ2026-1.html>

Schedule: 4 half-days between February and March.

Ecology applied to Urbanism and Spatial Planning

Teacher(s): Emmanuël Sérusiaux
Language of instruction: French
Location: Sart-Tilman

Number of ECTS: 3
Spring semester

This course analyses the interface "Environment, Nature and Management", and proceeds based on questioning, taking special note of historical analysis and the social and cultural approach. The main topic remains conservation of nature.

The course will attempt to make students aware of the many approaches to nature conservation, particularly the diversity of situations found in the world, and will also show how the erosion of biodiversity in our home regions is the result of a radical modification of the modes of occupying territory and developing resources. The intention is to give students basic knowledge of the biology of conservation, including main concepts and basic values, and to describe the framework of reference linking politics and nature conservation in Wallonia.

The course has 7 parts:

- General introduction to questions concerning land use, nature, and the environment
- Basic concepts of the biology of conservation
- Values and use of biodiversity
- Historical presentation of the impact of human activities
- Presentation of contemporary problems confronting our natural heritage
- The forest of the damned
- Conservation of nature in Wallonia

More information: <http://progours.ulg.ac.be/cocoon/en/cours/ESHY0016-1.html>

Schedule: Thursdays 9:00AM to 12:00 and 2:00PM to 4:00PM the 6 first weeks of class



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All Year long

Climate changes and impacts

Teacher(s): Louis François, Guy Munhoven

Language of instruction: French

Prerequisite knowledge and skills: Basic knowledge about how of physical, chemical and biological processes control Earth's evolution

Location: Sart-Tilman

Number of ECTS: 4

All year long

This course provides a synthesis of ongoing and future climate change and of its impacts on the environment and human societies. It is mostly based upon the IPCC report, which is available from the world-wide web. The following themes are covered:

1. Overview of the climate system;
2. Greenhouse effect and radiative forcing;
3. Carbon cycle and greenhouse gas balances;
4. Climate change during the 20th century: data analysis and models;
5. Past climate changes: methods of reconstruction and synthesis of observations (last millennium, Holocene, Pleistocene)
6. Future climate change: SRES socio-economic scenarios and IPCC climate projections
7. Climate change impacts (sea-level, hydrology, terrestrial and marine ecosystems, human societies).

More information: <http://progcours.ulg.ac.be/cocoon/en/cours/CLIM0003-3.html>

Schedule: 1st quadrimestre Tuesday 1:00PM to 5:00PM. 2nd quadrimestre Thursday or Friday 9:00AM to 12:00

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Fall semester

Innovation pour un développement durable

Teacher(s): Alain Grandjean, Claude Henry
Language of instruction: French

Number of ECTS: 4
Fall semester

La trajectoire de développement sur laquelle nous nous trouvons conduit à des problèmes insurmontables, tant économiques et sociaux qu'écologiques. Des innovations scientifiques et technologiques peuvent permettre de passer à une trajectoire de développement plus durable, à la condition expresse de s'inscrire dans des changements profonds des comportements et des institutions.

Pourquoi faut-il que nous mobilisions le meilleur de nos ressources (tant humaines que matérielles) pour mettre en oeuvre une forme plus durable de développement? Parce que des milliards d'hommes et de femmes subissent des niveaux inacceptables de pauvreté. Parce que l'état de notre planète se détériore à un rythme tel qu'un grand nombre de formes de vie, la nôtre comprise, sont sous des menaces dramatiques (érosion de la diversité biologique, difficulté croissante d'accès à l'eau douce, appauvrissement des sols cultivables, excès de consommation énergétique, changement climatique). Il ne sera, pour le moins, pas facile de passer de la trajectoire de développement sur laquelle nous nous trouvons à une trajectoire significativement plus durable. Cela implique une mobilisation radicale de la volonté et des ressources des sociétés humaines: ressources scientifiques, techniques et organisationnelles; et, au moins autant, transformations des comportements et des institutions.

Après avoir présenté des éléments approfondis de diagnostic, nous examinerons les méthodes et instruments scientifiques et technologiques susceptibles de contribuer à une transition vers un trajectoire de développement durable, et au maintien sur celle-ci. Comme nous le verrons, on sous-estime souvent la variété et l'efficacité des méthodes et instruments d'ores et déjà disponibles. Quant à ceux qui sont en gestation certains, absolument critiques comme le stockage de l'électricité, la capture du CO₂ de l'air ou les méthodes biologiques intégrées en agriculture, pourraient être développés en temps utile, malgré d'indéniables difficultés.

Cependant, point essentiel à comprendre, prétendre mobiliser la science et la technologie au bénéfice d'un développement soutenable serait vain en l'absence de changements profonds



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concernant les modes de diffusion des acquis scientifiques et technologiques, les incitations orientant les comportements individuels et collectifs, les structures de gouvernance à tous les niveaux, du local au mondial ; une attention particulière sera accordée aux instruments économiques. Ces changements sont cruciaux et plus difficiles à obtenir que les résultats scientifiques et technologiques, aussi complexes que ceux-ci puissent être. Mais ils sont compatibles avec une certaine forme de croissance économique, au contenu cependant profondément modifié, comportant certes un croissance réelle dans certains secteurs, mais une décroissance radicale dans d'autres.

More information: <http://formation.sciences-po.fr/en/enseignement/2016/kint/3590>

Politics and Economics of International Energy

Teacher(s): Giacomo Luciani, Tom Moerenhout
Language of instruction: English

Number of ECTS: 4
Fall semester

The definition of energy sustainability is based on three core dimensions – energy security, energy equity, and environmental sustainability. More frequently than not, these three objectives are mutually contradictory or incompatible. The future of energy thus poses a trilemma, i.e. the need to navigate difficult trade-offs between the three major objectives. Energy – oil, gas, power – remains one of the biggest businesses, and maintains a strategic characterization that sets it aside from other economic sectors. As such, it attracts the attention of industrial, financial and political actors internationally. The course aims at providing students with the critical knowledge and skills to avoid superficial generalizations and simplifications – which unfortunately remain all too common.

More information: <http://formation.sciences-po.fr/enseignement/2016/OAEN/2070>

Environmental Politics

Teacher(s): Elodie Druez, Florence Faucher
Language of instruction: English

Number of ECTS: 9
Fall semester

The objective of the course is to explore the articulation between environmental attitudes and worldviews and how they contribute to shape green political action in a context where the imminence of a global ecological crisis (global warming, threats on biodiversity, scarcity of



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resources) is no longer really in question. Having analysed how different conceptions of nature shape our attitudes to its enjoyment, understanding and exploitation, we will then reflect on the role of individuals in contemporary politics, from collective mobilisation in movements and parties to the emergence of the “citizen-consumer”. We will contrast the parliamentary (green parties, greening the mainstream) and the extra-parliamentary strategies of environmental movements (associations, the rise of lobbying) and analyse the role of the media and economic interests. We will explore the challenges to environmentally friendly public policies at the national and international levels.

More information: <http://formation.sciences-po.fr/enseignement/2016/bspo/1610a>

Énergies renouvelables : opportunité ou nécessité?

Teacher(s): Vincent Jacques le Seigneur
Language of instruction: French

Number of ECTS: 4
Fall semester

Une triple révolution conduit les décideurs à l'aggiornamento des politiques publiques en matière d'énergie : la raréfaction des ressources fossiles, le changement climatique et l'accident de Fukushima. Comment l'Union européenne et, en particulier, la France relèvent ce défi qui est non seulement technologique mais aussi économique et sociologique ? Et quelles sont les voies à privilégier pour transformer ce qui semble être une fatalité en une opportunité? La transition énergétique peut en effet être une chance pour notre pays et, plus encore, offrir un nouveau dessin au projet européen, soixante ans après le premier traité sur le charbon et l'acier. Faut-il encore qu'une vision et des outils, une méthode et des objectifs soient clairement définis et partagés par le plus grand nombre.

More information: <http://formation.sciences-po.fr/enseignement/2016/oadd/2100>

Climate Geopolitics: International Relations in a Warming World

Teacher(s): François Gemenne
Language of instruction: English

Number of ECTS: 4
Fall semester

The course will connect classical theories of international relations with practical case-studies and examples of environmental changes, and will propose new conceptual frameworks on this basis. Climate change has now grown from a scientific concern to one of the most pressing political issues of our time. Yet it continues to be often regarded as an environmental issue, which could be solved through technical measures and environmental policies.



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This course challenges this assumption and shows how climate change poses a significant challenge to international relations, as well as to the very concepts they rely on: territory, sovereignty, justice... Though the Paris Agreement, negotiated at COP21 in 2014, constitutes the first universal agreement on climate change, the views and policies on climate change remain anchored in national contexts. As we are now entering the Anthropocene, the 'Age of Humans', what will international relations look like in a world transformed by climate change?

More information: <http://formation.sciences-po.fr/enseignement/2016/OADD/2165>

Introduction to Environmental Economics

Teacher(s): Miguel Cardenas Rodriguez, Stephen Smith
Number of ECTS: 4
Fall semester
Language of instruction: English

Economics provides a framework for thinking about environmental policy choices, and some distinctive insights that have had a major influence on policy in recent years. This course provides an overview of the economic approach to key environmental policy issues, including air pollution, climate change, and biodiversity, and an assessment of the merits of different policy interventions – comparing conventional regulation and market mechanisms such as emissions trading and taxation. Policy case studies examine in detail the experience of some recent policy innovations, and the contribution that economics can make to better policy assessment. Exposition is non-technical, and the course should be accessible to students with little previous economics as well as those with a more extensive grounding in the discipline.

More information: <http://formation.sciences-po.fr/en/enseignement/2016/oadd/2145>

International Politics of Climate Change

Teacher(s): Alice E. Baillat, François Gemenne
Number of ECTS: 9
Fall semester
Language of instruction: English

Climate change has now grown from a scientific concern to one of the most pressing issues of our time. This seminar aims to look at the topic from a political viewpoint, and analyze the different mechanisms of cooperation in the fight against climate change. The first part provides an appraisal of climate change as a political issue: it examines how environmental issues, and climate change in particular, became a topic on the international agenda. The second part addresses the intertwining relationship that exists between international relations and climate change: how does diplomacy influence climate talks, and how does global warming impact upon



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the relations between states? Finally, in the third part of the seminar, students will be asked to put themselves in the shoes of UN delegates in a role-playing game simulating discussions on the future of the Kyoto Protocol. The simulation will seek to apply the knowledge and insights gained from the seminar into the design of a new, international cooperation mechanism. The seminars provides an introduction of the politics of climate change, and tries to decipher the political mechanisms involved in the fight against global warming. The seminar should be of interest for all students interested in international relations and environmental policies, and environmental diplomacy in particular. No prerequisite nor prior knowledge of the topic is needed.

More information: <http://formation.sciences-po.fr/enseignement/2016/bhum/1550a>

Climate Change Security and International Development

Teacher(s): Odette Tomescu
Language of instruction: English

Number of ECTS: 4
Fall semester

The course is intended principally for undergraduate students and addresses the need for a clearer understanding of the multiple relationships between climate change and international, national and local security issues. Environmental problems are closely linked to security issues at the individual, national and international levels. The physical effects of climate change, such as sea level rise, droughts, floods and other extreme weather events, will lead to social and economic problems: large scale migration, crop failure, faster and wider spread of diseases, economic volatility, and resource competition. Climate change accelerates global instability and exacerbates existing tensions around the world. The effects of climate change call for an immediate response from the international community and underline the necessity to focus on enhanced mitigation and adaptation measures. The course intends to contribute to the analysis and understanding significant environmental and development improvements, such as the recognition and empowerment of local and indigenous communities in the shaping of climate change mitigation and adaptation measures, and the identification and mitigation of conflicts that arise from climate change related issues.

Topics include:

- Climate change threats (conflicts over resources and border disputes)
- Environmentally induced migration
- Tensions over energy supply
- International Governance and the UNFCCC Regime



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- The Implications of Climate Change for Global Governance
- European Union's climate diplomacy
- Development in the Post-2015 Agenda

More information: <http://formation.sciences-po.fr/en/enseignement/2016/daff/2325a>

The Euro, Migration, and Climate Change: European Challenges and Opportunities

Teacher(s): Christophe De Sahb, Resetnikov Jevgenij
Language of instruction: English

Number of ECTS: 4
Fall semester

The objective of the class is to provide students with a critical understanding of the major issues currently faced by European countries, and the interplay between Member States, European institutions, global challenges and democratic legitimacy concerns. We will analyse the facts to understand the major causes, potential consequences and think of possible solutions to address economic, social and political challenges existing in the euro area, created by the unprecedented migrant flows to Europe, and in the fight against climate change. We will also have a close look at the dynamics of decision-making at the EU level through a simulation of Member State negotiations in the Council of the EU. By the end of term students are expected to have acquired a critical approach and a solid understanding of the major issues and debates on the topics covered during the class. No prior knowledge of the European Union is required. To give all students an equal understanding of the basic functioning of EU institutions, the 2nd and 3rd sessions will be dedicated to explaining the fundamentals of the institutional functioning and decision-making at the EU level.

More information: <http://formation.sciences-po.fr/enseignement/2016/dspo/2355a>

Changement Climatique: Causes et Conséquences

Teacher(s): Jean Jouzel, Hervé Le Treut
Language of instruction: French

Number of ECTS: 4
Fall semester

Le cours sera destiné à montrer les implications multiples du diagnostic scientifique dans les négociations climatiques récentes ou à venir. Il sera ponctué par deux séances de débats,



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intégrées dans le cours et préparées avec les élèves en fonction de leur nombre. Le cours sera destiné à montrer les implications multiples du diagnostic scientifique dans les négociations climatiques récentes ou à venir. Il sera ponctué par deux séances de débats, intégrées dans le cours et préparées avec les élèves en fonction de leur nombre.

La première partie ira de la science vers les négociations : on dressera un panorama des causes et des conséquences du changement climatique, en s'appuyant en particulier sur le cinquième rapport du Groupe Intergouvernemental d'Experts sur l'Evolution du Climat (GIEC) dont les trois volets ont été publiés en 2013 et 2014, et sur les résultats de recherches plus récentes. Il s'agira de mettre en avant les éléments de certitudes et d'incertitudes du diagnostic scientifique qui définissent les enjeux et les points d'appui de la négociation.

La seconde partie sera construite au contraire autour des besoins scientifiques qui naissent des négociations climatiques. Les mesures à mettre en œuvre, les modalités de leur mise en œuvre, seront discutées à la lumière des acquis récents de la COP 21 (Paris) et des enjeux de la COP 22 (Marrakech). L'accent sera mis sur la façon dont la communauté scientifique doit y contribuer, à travers le diagnostic du GIEC, mais aussi à travers d'autres formes d'expertises et de médiations scientifiques, destinées à des acteurs variés de la société – et ceci aussi bien pour les aspects liés à l'adaptation au réchauffement climatique qu'à son atténuation.

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More information: <http://formation.sciences-po.fr/enseignement/2016/oadd/2015>

Spring semester



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Justice sociale et justice écologique

Teacher(s): Cécile Renouard
Language of instruction: French

Number of ECTS: 4
Spring semester

Pour les premiers penseurs libéraux, marqués par l'idéal des Lumières qui met en avant l'autonomie humaine et la libération de la violence d'un pouvoir arbitraire, et va de pair avec le désir de s'affranchir des dépendances matérielles, les ressources naturelles sont supposées exister en quantité indéfinie, et être disponibles pour une transformation permettant de sortir sans heurt aussi bien des croyances et traditions aliénantes que de la misère. Il en résulte, pour nos sociétés, diverses tensions relatives à la place accordée à la vulnérabilité, à la finitude et à la lutte sociale et politique. A cet égard, le libéralisme apparaît comme un ennemi de l'écologie qui, a contrario, dans ses aspects sociaux et politiques, fait valoir les interdépendances, le souci des communs, l'intégration des limites, les conflits et la mort. Le cours commencera par analyser les limites de diverses sources morales de la pensée libérale (théories du contrat, utilitarisme, éthiques du capitalisme) vis-à-vis des enjeux écologiques, pour dessiner les contours d'une éco-justice fondée sur une anthropologie relationnelle, en dialogue avec certaines théories de la justice environnementale et éthiques de la nature contemporaines.

More information: <http://formation.sciences-po.fr/enseignement/2016/IFCO/2330>

Ecological Science and nature-based solutions: issues and challenges

Teacher(s): Luc Abbadie
Language of instruction: English

Number of ECTS: 4
Spring semester

Human activities affect the Earth from the local to the global scale and bring about rapid changes: climate, atmospheric chemistry, biodiversity, water resources and soils. There is a great need for mitigation and adaptation to changes and for rehabilitation of damaged ecosystems and ecosystem services. Beside technical solutions, some nature-based solutions are more and more often proposed and implemented. The aim of the course is to present the ecological basics of these so-called nature-based solutions, to assess their scientific soundness, and to discuss their potentials and limits. A special focus will be put on biodiversity and ecosystem services, ecological agriculture, carbon sequestration, ecosystem restoration, adaptation to climate change and urban ecology.

More information: <http://formation.sciences-po.fr/enseignement/2016/OADD/2175>



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Climat, environnement : faut-il réécrire l'histoire ?

Teacher(s): Grégory Quenet
Language of instruction: French

Number of ECTS: 4
Spring semester

Lors de la COP21 qui s'est déroulée à Paris en 2015, les scientifiques se sont mobilisés pour peser sur le processus des négociations internationales, surtout du côté des sciences de la nature et des économistes. Pour les disciplines (l'histoire, la sociologie, la géographie...) qui se sont constituées comme science à la fin du XIXe siècle, lorsque triomphait la Révolution industrielle qui est aux origines du changement climatique et de l'Anthropocène, le positionnement est plus délicat : Se seraient-elles trompées en sous-estimant l'ampleur des changements climatiques et environnementaux ? Doivent-elles réviser leurs fondements théoriques et leur compréhension des phénomènes sociaux et culturels ? Ce cours répondra à la question du point de vue de la science historique.

More information: <http://formation.sciences-po.fr/enseignement/2016/IFCO/2285>

Political Philosophy of Nature

Teacher(s): Bruno Latour
Language of instruction: English

Number of ECTS: 4
Spring semester

The class will present the basis of political philosophy as it is renewed by the impact of the present ecological situation. It will use the mAKE it work experience of last year as its benchmark and will use the events of the COP 21 as its empirical field work. Special interest will be paid to the new geopolitical map drawn by the COP and its aftermath. Students will work in team of two to debrief the experience of the COP in the light of the concepts developed in the class.

More information: <http://formation.sciences-po.fr/enseignement/2016/IFCO/2120>

Environment and Migration

Teacher(s): François Gemenne, Caroline Zickgraf

Number of ECTS: 4



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Language of instruction: English

Spring semester

Massive population displacements are regularly forecasted as one of climate change's most dramatic consequences. The nexus between environmental change and migratory dynamics are however far more complex than the usual causal and direct Relationship portrayed by media and policy-makers.

Objective of the course: building upon extensive fieldwork, this class aims to examine the reality of migratory flows associated with environmental disruptions – those induced by climate change, of course, but also those induced by other causes such as industrial accidents. A second part of the class addresses the policy responses that have been implemented so far, as well as those that are envisioned for the future.

More information: <http://formation.sciences-po.fr/enseignement/2016/oadd/2135>

Biodiversity Values and Policy

Teacher(s): Renaud Lapeyre, Yann Laurans, Julien Rochetete

Number of ECTS: 4

Language of instruction: English

Spring semester

This seminar aims at providing students with a general understanding of key biodiversity issues and policy implementation, from local level action to international governance, with specific attention (in terms of instruments) to economic instruments, economic analysis, international regulation, and also (in terms of field) oceans governance and management. Its objectives are: Providing a 360° outlook of the dominating ideas and opinions in the field; Providing a basic knowledge of instruments and techniques involved in policy-making assessment, evaluation and economic valuation ; Allowing personal and well-informed opinions with respect to the main concepts used by research and policy communities. More specifically, the seminar will deal with how the biodiversity issue can be framed (in comparison to climate change), with its international governance system (institutions, norms, stakeholders), its policy instruments, its valuation instruments, as well as with the main controversies that generate debate within the conservation community. The seminar will also provide a critical overview of public policies, strategies and instruments that contribute to the implementation of the Convention on Biological Diversity at the national and sub-national level. Practical case studies and examples will be illustrated and studied.

More information: <http://formation.sciences-po.fr/enseignement/2016/oadd/2045>



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Environmental issues in Energy and Natural Resources Management

Teacher(s): Guilhem Blanchard, Simon Bordenave
Language of instruction: English

Number of ECTS: 4
Spring semester

This course aims at providing students with a systemic approach to environmental issues related to energy provision and natural resources management. As much as possible, it will be based on concrete examples of public policies at various levels (local, national - in France and abroad -, and international). Emphasis will be put throughout the course on the need to put environmental consequences of energy and natural resources, as well as the tools to mitigate them, in the broadest perspective. The course will suggest solutions to environmental problems, not trying to convince students of their relevance or completeness, but rather seeking to trigger their reflection (and, eventually, constructive criticism) over their efficacy, efficiency and potential “second order” consequences.

More information: <http://formation.sciences-po.fr/enseignement/2016/oafp/4225>

Governing Nature and Africa Since Colonization

Teacher(s): Guillaume Blanc
Language of instruction: English

Number of ECTS: 4
Spring semester

Scholars have concerned themselves with race, class and gender because they offer a means of exploring the history of oppressions. But power inequalities also literally take place, occurring in landscape with their own peculiar attributes. By focusing on how different groups went about shaping environment as a resource to exploit, a territory to build and a representation to impose, this course will explore the history of power in Africa, during and after colonization. Emphasis will be especially given to politics of nature. Between an African Eden that would be irreparably damaged by its inhabitants and a Western ecosystem faded by the technical brilliance of men lays a power struggle that reveals not only the political dimension of African nature, but also the very nature of African modes of governance.

More information: <http://formation.sciences-po.fr/enseignement/2016/OCAF/2145>

Decarbonisation Scenarios and Renewable Energy Sources

Teacher(s): Manfred Hafner

Number of ECTS: 4



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Language of instruction: English

Spring semester

This interdisciplinary course addresses the issue of Decarbonization of energy systems and the potential future role of Renewable Energy Sources from a technological, economic and policy perspective. Expectations on the future role of renewable sources of energy are very high, but are scenarios of decarbonisation realistic? This course will review the promises and pitfalls of individual renewable energy sources alternatives and their integration in energy systems, in view of allowing full critical understanding of the conditions under which these may come to play a truly important role in global energy supplies.

Objective of the course: To get a good understanding of the state of the art and the expected development of Renewable Energy Sources and their implementation potential to contribute to decarbonization scenarios as well as of the challenges and opportunities of different Renewable Energy Sources for their integration in energy systems.

The Course “Decarbonisation scenarios and Renewable Energy Sources” will address, among others, the following topics:

- Climate Change issues and decarbonisation scenarios: why and how to decarbonize
- Role of Energy Efficiency
- Renewable energy sources: understanding how they work, their pros and cons:
 - Solar: Photovoltaic (PV), Concentrated Solar Power (CSP), solar heat...
 - Wind turbines
 - Hydroelectricity: river-run, storage, pumping-storage plants, tidal and wave...
 - Biomass and bio-fuels
- Challenges and opportunities of renewable energy sources:
 - RES integration into electricity grids
 - Different implementation policies: pros and cons
 - Future schemes and special initiatives such EC's Decarbonization Roadmap, the Nordic Countries Carbon Nuclear Scenario, Desertec, Masdar City, etc...
- Decarbonisation scenarios and Renewable energy pathways (IEA, EREC, Greenpeace, Eurelectric, EC, etc...

More information: <http://formation.sciences-po.fr/enseignement/2016/oaen/2050>

From Local to Global: Decision Making for the Environment

Teacher(s): Henri Landes, Johann Margulies

Language of instruction: English

Number of ECTS: 4

Spring semester

Policies on environmental issues face a unique challenge: managing different scales. Adapting administrative layers and political contexts to the physical and scientific realities of natural



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resources and public goods is a complex assignment. While relations between Nation-States retain their relevance, non-state actor participation in environmental decision-making - such as of local governments, regional organisms, private sector stakeholders and NGOs - is rapidly becoming more fruitful. Trans-scalar initiatives very much emanate from civil society and local public authorities, often responding to the shortcomings of multilateralism on environment. New dynamics, often lateral and network related, have recently developed and bring innovative solutions to environmental governance. This seminar intends to be precise on the movement from one legal framework to another, from one level of awareness to another, from one set of stakeholders to another. It intends to better understand and to question the term “glocal”.

More information: <http://formation.sciences-po.fr/enseignement/2016/oadd/2150>

Théories et Politiques de la Décroissance

Teacher(s): Luc Semal, Agnès F. Sinai
Language of instruction: French

Number of ECTS: 4
Spring semester

Ce module propose une approche historique, théorique et critique de la notion politique de décroissance. Originellement formulée et théorisée dans les années 1970, la notion de décroissance est devenue un objet politique du fait de l'échec persistant de l'économie, du politique et du développement durable à inverser les tendances lourdes de la crise écologique, tant sur le plan environnemental que sur le plan social. Ses racines théoriques plus anciennes ont permis la construction d'un système de pensée cohérent, avec ses valeurs et son vocabulaire. Face à l'emballement des crises mondiales, la décroissance acquiert aujourd'hui une dimension prospective qui questionne l'avenir de sociétés industrialisées de plus en plus contraintes à reconsidérer leurs espoirs de développement illimité, tout en esquissant des propositions d'alternatives faites de résilience, de relocalisation, d'autonomisation et de sobriété.

More information: <http://formation.sciences-po.fr/enseignement/2016/kint/3580>

Climate Change and International Security

Teacher(s): Odette Tomescu
Language of instruction: English

Number of ECTS: 4
Spring semester

The course is intended principally for students selecting International Relations (including sub-sectors such as security studies, strategic studies and geopolitics) and European Studies tracks. This course addresses the need for a clearer understanding of the multiple relationships between climate change and international, national and local security issues. Environmental



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problems are closely linked to security issues at the individual, national and international levels. The physical effects of climate change, such as sea level rise, droughts, floods and other extreme weather events, will lead to social and economic problems: large scale migration, crop failure, faster and wider spread of diseases, economic volatility, and resource competition. Climate change accelerates global instability and exacerbates existing tensions around the world. The effects of climate change call for an immediate response from the international community and underline the necessity to focus on enhanced mitigation and adaptation measures. The course intends to contribute to the analysis and understanding significant environmental and development improvements, such as the recognition and empowerment of local and indigenous communities in the shaping of climate change mitigation and adaptation measures, and the identification and mitigation of conflicts that arise from climate change related issues.

More information: <http://formation.sciences-po.fr/enseignement/2014/oadd/2110>

Droit de l'environnement : prévention des risques et la répression des atteintes à l'environnement

Teacher(s): Sébastien Mabile
Language of instruction: French

Number of ECTS: 4
Spring semester

Le cours visera à présenter les grands principes du droit de l'environnement (principes de prévention, de précaution, pollueur-payeur, information et participation, responsabilités communes mais différenciées, prévention des dommages), leur origine et leur consécration juridique. La mise en œuvre de chacun des grands principes exposés sera décrites à travers des exemples concrets de conflits (barrage de Sivens, Notre Dame des Landes, Erika...) ou de politiques environnementales (changements climatiques, biodiversité). Pour chacun des principes, la mise en œuvre sera analysées à travers les trois échelles d'action pertinentes : internationale, communautaire et nationale.

More information: <http://formation.sciences-po.fr/enseignement/2016/oadd/2050>

Project Management for Sustainable Development

Teacher(s): Jean Plichon
Language of instruction: English

Number of ECTS: 4
Spring semester

Most jobs today require strong project management skills, especially those involving managerial responsibilities. Simultaneously, the number of projects tackling Sustainability issues is slowly but regularly increasing.



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The objectives of this course are thus two-fold:

- bring to the next generation of managers a sound understanding of basic project management tools and methods;
- present the practical means by which to apply Sustainability principles to project management.

To do so, we will start with the definition of the “Sustainable Development” and “Project management” concepts, which will include the review of Sustainability approaches / models and Project Management tools such as SMART objectives, task planning or reporting templates. Sustainable Development elements will relate to organizations (big corporation and SMEs alike) as well as communities such as cities or national parks (*)

The second part of the course will tackle key projects stages (preparation, kick-off, management, reporting), their related tools and methods and how they apply to Sustainability specifics, for example stakeholders engagement or situation assessment.

During the final part of the course, we will look in detail at some particular projects (ex: the implementation of sustainability indicators or the definition of sustainable procurement processes) whilst working on a project planning exercise, thus reinforcing the practical understanding of the tools studied.

More information: <http://formation.sciences-po.fr/enseignement/2016/kint/4885>

The Politics of Climate Change

Teacher(s): Michel Colombier
Language of instruction: English

Number of ECTS: 4
Spring semester

After years of difficult negotiations, the Paris COP21 was supposed to pave the way towards a more sustainable mode of development. How can we understand the outcome of the Paris meeting? What is really needed to mitigate Climate Change and live with its effects in the future? Do we have the technologies to simultaneously respond to the needs of a growing world population and seriously reduce global emissions? What policies are needed to conduct the energy transition? What is the role of the different stakeholders (politicians, civil society, private sector)? Who will be the winners, and the losers? What can be the role, if any, of an international agreement in governing such a complex transition? This module builds on the scientific diagnosis to present the challenges attached to the transition towards low carbon economies. Based on empirical data and experience, a discussion of the different policy instruments is proposed, along with an analysis of key stakeholder strategies. Specific attention will be given to the specificity of different contexts (developed, emerging and developing countries) and economic sectors in evaluating the efficiency and the effectiveness of alternative policy design in driving technological, economical and societal change. We will also explore the difficulty to build



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collective action at the global level, by revisiting the most significant moments in the history of negotiation, and discuss possible avenues forward.

More information: <http://formation.sciences-po.fr/enseignement/2016/oadd/2025>

Getting the Job done: Implementing Energy and Climate Policies after the Paris Agreement

Teacher(s): Michel Colombier
Language of instruction: English

Number of ECTS: 4
Spring semester

Climate and energy policies are undergoing unprecedented and rapid changes following the landmark Paris Agreement for climate that was reached, signed and ratified since COP21 in 2015. Developed and developing countries are moving from broad and ambitious climate objectives to concrete policies. "Getting the job done" is a course designed to help students question and make sense of recent policy announcements as well as underlying trends of climate change mitigation and adaptation. It will review a variety of initiatives and measures taken by public institutions, companies, NGOs and the financial sector in an effort to shift to more sustainable economies and development pathways. The course will be articulated in 12 sessions covering energy and climate in a sequence "from man to cloud". It will start with a description of the global energy and climate systems. It will then adopt the point of view of key stakeholders (government, civil society organizations, private sector, international institutions) in their efforts to develop energy and climate policies. The course will encourage students to enquire about existing and potential policies in a country of their choice, and to participate in various interactive exercises, including a simulation of international negotiation, set up in an operational approach of energy and climate challenges. Disclaimer: The syllabus may slightly be updated.

More information: <http://formation.sciences-po.fr/enseignement/2016/deco/1985a>

Humanites Scientifiques: Energie, Population, Climat: vivre dans un monde fini

Teacher(s): Roland Lehoucq
Language of instruction: French

Number of ECTS: 4
Spring semester

La Terre est un système fini. Une fois formulé, le constat semble évident. Au quotidien, il passe pourtant inaperçu, tant les échelles humaines et terrestres sont différentes. L'écart est même si grand que nous avons toujours puisé sans compter dans des ressources imaginées, sinon infinies, du moins immensément vastes. Bien que l'humanité modifie depuis longtemps



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l'écosystème terrestre, la part qu'elle y prélève a longtemps été négligeable par rapport aux ressources disponibles. Ce n'est que récemment que son action a eu des effets mesurables à l'échelle planétaire. L'efficacité de nos systèmes techniques et l'accès à des sources d'énergie bon marché ont permis un essor considérable de la population mondiale et une augmentation sans précédent de la consommation des ressources en matière première. Après des décennies de croissance exponentielle, l'activité humaine rivalise désormais avec les forces de la nature. Une façon de quantifier les actions humaines est de considérer l'énergie qu'elles consomment. Et comme 80 % de l'énergie dont nous disposons provient de combustibles fossiles émetteurs de gaz à effet de serre, le changement climatique en cours a très certainement une origine anthropique, d'après le Groupe d'experts intergouvernemental sur l'évolution du climat (GIEC). Existe-t-il des sources d'énergies alternatives non polluantes et renouvelables d'ampleur suffisante ? Faut-il repenser les termes de la croissance ? Les conséquences de nos actes, souvent irréversibles, dépassent ce que notre environnement peut supporter. Il faut donc que ces actes et les techniques qui les permettent soient collectivement compris, débattus et choisis. Comme les systèmes énergétiques sont conçus et mis en place sur plusieurs décennies, il est donc nécessaire de penser l'avenir à grande échelle de temps. La tenue à Paris, en décembre 2015, de la grande conférence internationale sur le climat (COP21) donnera une actualité exceptionnelle aux sujets traités dans le cours. Il est urgent de tirer les conséquences du constat que Paul Valéry exprimait dès 1945 dans Regards sur le monde actuel : « Le temps du monde fini commence. »

More information: <http://formation.sciences-po.fr/enseignement/2016/bdev/1100a>

Sustainable Development of Agriculture and Food Systems

Teacher(s): Sébastien Treyer, Tancrede Voituriez
Language of instruction: English

Number of ECTS: 4
Spring semester

This course is aimed at giving key elements of comprehension about agriculture, food security and sustainable development, in particular for what makes it an international question, and an issue for international coordination. It particularly aims at reframing recently largely mediated questions concerning food security that might seem reduced to agricultural production, and will be illustrating the complexity of global food systems. Because they are nevertheless key elements for food security and sustainable development, the course will discuss the role of agricultural development in global macroeconomic development strategies, and controversies concerning agriculture in trade negotiations. The course will also make the link between agriculture, food security, domestic policies and global governance institutions. Various disciplinary fields will be mobilised : economics, political sciences, management sciences.

More information: <http://formation.sciences-po.fr/enseignement/2016/KINT/4310>



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Global Hunger

Teacher(s): Oliver De Schutter
Language of instruction: English

Number of ECTS: 4
Spring semester

Why are almost one billion people hungry in a world in which increases in agricultural production have consistently outstripped demographic growth? The objective of the course is to understand how governments have sought to combat hunger and malnutrition; why they have so dramatically failed; and how law and governance are relevant to what can be done about this. The course shall build on the issues addressed in the mandate of the lecturer as the United Nations Special Rapporteur on the right to food between 2008 and 2014, and now as Co-Chair of the International Panel of Experts on Sustainable Food Systems (IPES-Food). It will be closely connected to contemporary discussions at international level (see www.srfood.org). We will discuss a range of topics linked in particular to the impacts of globalization on the right to food, including international trade, investment in agriculture, the role of transnational corporations in the agrifood sector, and intellectual property rights in agriculture ; we will also address the threat of climate change to food security and the debate on the shift to sustainable agriculture ; as well as the role of institutional mechanisms aimed at protecting the right to adequate food and the recent reform of global governance of food security. While the focus will be on hunger and undernourishment in developing countries, the seminar will also address the impacts on the South of policies in the North (in the areas of agriculture, intellectual property rights, trade and investment, and food aid). The course shall be of interest to students working on the links between law and development and on the challenge posed to governance by economic globalization ; it can also be seen as a case study on the challenges facing the implementation of a particular human right, the right to adequate food ; finally, it will provide an entry point into the United Nations system and into the relationships between the United Nations agencies and other organizations such as the World Trade Organization or the international financial institutions. Many of the topics addressed are highly politicized and polemical. The course will serve to confront diverse viewpoints, and it will seek to provide the students with the tools he or she needs to form his or her own opinion. Although the approach combines law and economics, as the aim of the seminar is to understand the legal and institutional factors in the political economy of food systems, no background in economics is required, and none of the readings suggested use formalized language.

More information: <http://formation.sciences-po.fr/enseignement/2016/KINT/4765>

Implementing the Paris Agreement: in Theory and in Practice

Teacher(s): Henri Landes, Vivian Depoues
Language of instruction: English

Number of ECTS: 4
Spring semester



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The Paris climate agreement was a historic moment in international cooperation on the environment. Over 190 countries and the European Union came together and set a common binding objective of limiting global warming to 2 degrees above preindustrial temperatures by 2100. In doing so, the heads of state and negotiators of the COP21 sent the signal to the international community that the world economy must now gradually move away from fossil fuels, the primary cause of humanity's greenhouse gas emissions.

This event was momentous and unprecedented. However, the COP21 in itself does not solve the problem of climate change. While the transition to a sustainable world is underway, it must undoubtedly accelerate and widen its scope of stakeholders that are genuinely involved. Countries, but also local governments, companies of all sizes and citizens have a role and a responsibility to enhance their commitment to fighting climate change. The implementation of the Paris agreement requires fundamental changes in relations between countries, in how the world economy functions, in how local governments and territories adapt to climate change's effects, and in how citizens consume products and live their lives.

This course will take a theoretical and practical approach to the implementation of the Paris agreement, examining issues from international negotiations to the sustainable lifestyles of citizens.

The objective of this course is to look critically at the COP21 agreement and to help students understand how it will change society concretely. The goal of this course is to allow students to benefit from a variety of perspectives on the COP21 agreement, as five professionals and researchers will teach different sessions of this course. Henri Landes will be present throughout all sessions in order to ensure the course's coherence and to be attentive to the student's general questions and interests

More information: <http://formation.sciences-po.fr/enseignement/2016/OADD/2170>

Human Rights, Freedom of Movement, Migration and Asylum in a Security Context

Teacher(s): Didier Bigo
Language of instruction: English

Number of ECTS: 4
Spring semester

The seminar aims at combining approaches of International Political Sociology with knowledges from European Migration Law and refugee rights, across a reflexion led by academics and high level practitioners who had to manage in very concrete terms situations under which human rights have to be defended within a security context where powerful actors argue of the necessity of their derogations in the name of diverse threats attempting to national or global security and use themselves the rhetoric of protection.



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In a context of so-called raise of global threats and insecurities, where public institutions refer to terrorism, organized crime, illegal migration, bogus refugees, we will examine specifically the cases in which the operational agencies of the European Union were forced to intervene and their practices, as well as their links with the governments of the EU Member States and Third Parties. How practically applies a policy of the European Union which is officially wanting to reconcile freedom, security and justice., inside the EU, at the borders and abroad? How the agencies for the protection of refugees or fundamental rights can intervene in a context where exceptions and derogations are claimed to be necessary? What are their relations with the diverse NGOs and the different European courts? Have the decisions of the judges an impact on these policies or not? Is it possible to challenge governmental policies on this domain?

Objective of the course:

To give to the students who are following these thematics a better knowledge of the political and legal strategies that are necessary in the protection of human rights while framing these strategies into a theoretical approach which can be used as a reference point in their future commitments.

More information: <http://formation.sciences-po.fr/enseignement/2016/OADH/3035>

Global Migration Governance

Teacher(s): François Gemenne, Thomas Lacriox, Hélène M. Le Bail, Hélène C. Thiollet, Catherine Withol De Wenden

Number of ECTS: 4

Spring semester

Language of instruction: English

Global mobility is woven into the social architecture of globalization and international relations. Global mobility and the institutional responses to this phenomenon are both a cause and an outcome of globalization. Mobility appears to be a point of tension of political modernity at the national and international scales. This seminar focuses on international organisations, on national and regional migration policies, on the structuring of life spaces of migrants and refugees and on transnational social dynamics of patterning mobility. It aims at shedding different and complementary thematic and academic lights on the migratory phenomenon at different scales. The course relies on a body of empirical and theoretical research in sociology, anthropology, political sciences and political economy. It addresses contemporary stakes while connecting with an academic reflection on national and international public action, its normative framework and principles towards mobility.

More information: <http://formation.sciences-po.fr/enseignement/2016/OAMI/2070>



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Economics of International Migration and Development: Challenges and Policies

Teacher(s): Jean-Christophe Dumont, Jean-Pierre Garson **Number of ECTS:** 4

Language of instruction: English

Spring semester

Basic concepts, definition and measurement of international migration, sources and nature of available statistics on international migration, content of international data bases. Analysis of migration systems and policies. Impact of migration on trade, growth and productivity. Migration and the labour market: demo-economic impact, impact on wages and flexibility, sectoral distribution of immigrant workers, complementarity and/or substitution between immigrants and nationals into the labour market, integration of immigrants and their children into the labour market. Fiscal impact of migration, public opinion and contribution of immigrants to economic development. Economic analysis of the links between migration, remittances and development. International mobility of the highly skilled: measurement and contributions to the debates on brain circulation as well as on the links between international migration and the globalisation of the economies.

More information: <http://formation.sciences-po.fr/enseignement/2016/OAMI/2060>

Political Economy of Climate

Teacher(s): Laurence Tubiana
Language of instruction: English

Number of ECTS: 4
Spring semester

Course Overview: This course will present the challenges attached to the transition towards low carbon economies. Based on empirical data and experience, a discussion of the different policy instruments is proposed, along with an analysis of key stakeholder strategies. Specific attention will be given to the specificity of different contexts (developed, emerging and developing countries) and economic sectors in evaluating the efficiency and the effectiveness of alternative policy design in driving technological, economical and societal change. We will then explore the difficulty to build collective action at the global level, by revisiting the most significant moments in the history of negotiation, discuss the outcome of the Paris Agreement as well as possible avenues forward.

More information: <http://formation.sciences-po.fr/enseignement/2016/kint/7555>



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ECOLOGICAL SCIENCE AND NATURE-BASED SOLUTIONS : ISSUES AND CHALLENGES

Teacher(s): Luc ABBADIE
Language of instruction: English

Number of ECTS: 4
Spring semester

Human activities affect the Earth from the local to the global scale and bring about rapid changes: climate, atmospheric chemistry, biodiversity, water resources and soils. There is a great need for mitigation and adaptation to changes and for rehabilitation of damaged ecosystems and ecosystem services. Beside technical solutions, some nature based solutions are more and more often proposed and implemented. The aim of the course is to present the ecological basics of these so called nature based solutions, to assess their scientific soundness, and to discuss their potentials and limits. A special focus will be put on biodiversity and ecosystem services, ecological agriculture, carbon sequestration, ecosystem restoration, adaptation to climate change and urban ecology.

More information: <http://formation.sciences-po.fr/enseignement/2017/oadd/2175>

THE PROTEIFORM GOVERNANCE OF INTERNATIONAL ENVIRONMENT

Teacher(s): Anne-Sophie CERISOLA
Language of instruction: English

Number of ECTS: 4
Spring semester

In December 2015 the Paris agreement signed in late 2015 was not only a diplomatic achievement, it was also the outcome of an unprecedented show of political power by a broad and diverse coalition of forces from global civil society. The agreement was crafted into being over the previous five years by governments as well as contributions from a civil society “stakeholders” that went from non-governmental organizations such as Avaaz or Greenpeace to scientific, academic and think-tank actors; multinational corporations and transnational businesses such as banks, law firms, accounting firms, rating agencies; global media; religious and spiritual actors; individual moguls; and local and regional governments. The course will retrace the early actions of civil society stakeholders, evaluate their interactions with states and international organizations, and assess future roles of non-state actors in international relations at a time when traditional multilateralism is under attack; conceptual issues will be addressed



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mostly through case studies. Lectures will impart an organizing framework and technical knowledge, and case discussions will allow students to exercise judgment on real-world situations. Students will be responsible for keeping up to date with international affairs news and their policy implications, which will be also discussed every week. Additional reading beyond the two required essays will be assigned via moodle.

More information: <http://formation.sciences-po.fr/enseignement/2017/OADD/2195>

SUSTAINABILITY OF GROWTH IN DEVELOPING COUNTRIES

Teacher(s): Paul COLLIER
Language of instruction: English

Number of ECTS: 4
Spring semester

Economic development is central to policy concerns. This module analyses the key political, social and economic processes which affect development, taking the perspective of a country which is initially poor. In the past decade economists have increasingly recognized that the foundations of prosperity are political: societies need polities that are both centralized and inclusive. No society starts with such a polity: the first part of the module analyses what determines whether these features develop. The second part covers the social conditions for development. Some cultures are more conducive to cooperation than others. Culture is analyzed as a set of beliefs generated from participation in social networks. The beliefs include a sense of identity, an understanding (or misunderstanding) of how the world works, and the norms that determine which behaviours generate respect and stigma. Like polities, cultures can to an extent be changed by policy choices. The third part covers three distinct economic opportunities – countries which are isolated, countries which are globally integrated, and countries which are resource-rich. Each is shown to require distinctive economic policies. The political and social difficulties of these policies are related back to the political and social conditions discussed in the first two parts of the course.

More information: http://formation.sciencespo.fr/enseignement/2017/KINT/4305?_ga=2.144084277.1462561459.1517500457-1340691996.1482096919

THE DIPLOMACY OF ENERGY

Teacher(s): Marc-Antoine EYL-MAZZEGA
Language of instruction: English

Number of ECTS: 4
Spring semester

Energy is an essential component of economic life. As such, governments are heavily involved in energy sectors and with each



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other, for example when energy flows cross borders. Energy can be either a tool or an objective of foreign policies and diplomacy. In conducting energy diplomacy, governments rely on corporations (sometimes state owned). In such a complex setting, the logic of diplomacy must interact with the commercial logic of corporations and with technological or resource limitation and realities. In addition to state governments, energy is an area of international policy making in international organizations with variable membership and rules. This course provides an in-depth discussion of international energy relations and energy diplomacy, with a particular emphasis on the regimes in which they take place (including written and unwritten rules). The course utilizes case studies (one per session) to entangle different modes of interaction between stakeholders; politics, markets and technology; bilateral and multilateral relations; and so forth.

More information:

http://formation.sciencespo.fr/enseignement/2017/OAEN/2570?_ga=2.219491865.1462561459.1517500457-1340691996.1482096919



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University of Economics in Bratislava

Fall semester

Distribution Systems and Logistics

Teacher(s): Ferdinand Dano, Peter Drabik, Robert Rehak

Language of instruction: English

Number of ECTS: 5

Fall semester

Introduction to the theory of distribution and logistics. Distribution channel and its importance in the commercialization of a product. Franchising as a modern form of distribution channel. Distribution bodies and their involvement in the distribution process. Logistics and methods of logistics. Logistics of purchasing, warehousing, transportation and sales. Importance of transport by road and its position. Transport nodes. Green logistics and corporate social responsibility of logistics companies.

Spring semester

Environmental Market and Marketing

Teacher(s): Rastislav Strhan

Language of instruction: English

Number of ECTS: 3

Spring semester



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The aim of the course is to provide an insight into the identification of green market potential, building of a successful competitive and marketing strategy and identification of an appropriate form of market communication. At the end, students should be able to understand the benefits of the use of the green marketing as well as to identify risks and problems attached. They should be able to realize the impact that the environmental market has on any business activity and opportunities that it raises for commercial sector.



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Fall and spring semester

Climate Change and Environment in International Relations

Teacher(s): Mikulas Cernota
Language of instruction: English

Number of ECTS: 3
Fall and spring semester

The aim of the course is to provide students with knowledge and picture of the complexity of relationships between human activity and environment on the Earth, which is being utilized in direct or indirect way. Natural resources are often limited and they are placed in the middle of competitive demands. Their management and responsible governance requires different methodologies and understanding of the environmental and socio-economic elements especially in the times of climate change. This course aims at providing details of environmental sciences as well as ethical, economic and social dimension of environment. At the end of the course, students will be equipped to critically assess current environmental problems through integrated approach as well as to understand the character of the ecosystems, which cross the state boundaries and are subject to common interests.

World agriculture and forestry

Teacher(s): Mikulas Cernota
Language of instruction: English

Number of ECTS: 3
Fall and spring semester

The aim of the course is to provide insights into the state of the current world agriculture and forestry, current problems, trends and politic and socio-economic solutions of sustainable development of agriculture and forestry.

1. Introduction to Biogeography and global ecological principles, economic geography
2. Climatic areas on Earth, Forests types, from tropical to boreal forests
3. Status of forest industry in the economy,
4. European forestry, practical examples of forest species
5. Key indicators of world agriculture – share on GDP, extent of agr. soil, key commodities
6. Agricultural production, prices development, food industry, terrain excursion



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7. Biodiversity conservation, invasive species, climate change, terrain excursion
8. Trends of exploitation of wood raw material, food security, genetic diversity
9. Urban forests, ecological agriculture, certification
10. Agroforestry systems, forests and agriculture in developing countries. Multilateral governance of agriculture and forestry resources, UN, NGOs

International Raw Materials

Teacher(s): Mykhaylo Kunychka
Language of instruction: English

Number of ECTS: 3
Fall and spring semester

The aim of the course is to provide students with a general overview of raw materials, which are used in industrial or energy sectors. This will be done with an emphasis on international market, multinational corporations, raw material resources, usage and price making, economic geography, new technologies etc.

The course covers topics such as energy resources (petroleum, natural gas, coal, uranium), ferrous and non-ferrous metals (lead, nickel, zinc), precious metals, diamonds, wood production, etc. The classes are devoted to international market issues, price determination and economic geography. The classes are designed to include lectures, questions and answers, paper readings and discussions of the material.

Investigating International Relations (research methods)

Teacher(s): Paula Puskarova
Language of instruction: English

Number of ECTS: 3
Fall and spring semester

This class is intended to accomplish two goals. First, this is a class to develop tools to pose empirical questions and answer them in a social scientific fashion. Second, you will finish this class having developed a template for your thesis or a research paper.

To accomplish the first goal, we will spend the bulk of class time on understanding both qualitative and quantitative research. The second goal is one of application – you will use insights picked up throughout the class to produce a research design of your own for use for example in your thesis.



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In the second half of the classes, we will work with statistical software to get a better grasp of quantitative methods to use in your research proposals. The class is intended for students with little knowledge about research or interest in better understanding of the variety of research methods.



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