



2EL6210 – Geopolitics of resources and objects

Instructors: Raphael Danino-Perraud

Department: CAMPUS DE RENNES

Language of instruction: FRANCAIS

Campus: CAMPUS DE RENNES

Workload (HEE): 60

On-site hours (HPE): 35,00

Elective Category : Business Sciences

Advanced level : No

Description

In their future careers as engineers, CentraleSupélec students will be called upon to place their practices in globalized economic and political worlds. These are characterized by the interconnection of different parts of the globe and an intensification of the flow of capital, goods and services on a global scale, made possible in particular by the development of means of transportation and information and communication technologies. Although globalized production and exchange networks appear to be free of all material constraints, they remain highly dependent on natural resources and technical objects.

Since the end of the 20th century, human activities and their impacts (urbanization, climatic and environmental changes) have contributed to increasing the pressure on resources and their availability. The geopolitics of resources and objects influences international power relations and raises power issues at various scales (local, national, regional, global).

To understand the stakes of our globalized political and economic system, we must therefore adopt a critical reading of techniques and resources. To do so, we adopt a perspective centered on a certain number of resources (mining, agricultural and energy, but also waste) and infrastructures (pipeline, electrical network, hydroelectric dam). It is from these geopolitical themes that students will be led to identify the power relationships between actors and the economic stakes associated with them.

Quarter number

SG6

Prerequisites (in terms of CS courses)

None



Syllabus

Detailed course outline (content): 11 sessions of 3h, 1 exam of 1h30

Session 1 - Introduction: a brief epistemology of resources - Raphaël Danino-Perraud and Angélique Palle (TD)

Session 2 - A transnational energy transport infrastructure as a geopolitical object - Noémie Rebière (CM)

Session 3 - Methodology of geopolitical mapping - Léa Gobin and Noémie Rebière (lab)

Session 4 - Geopolitical impacts induced by the energy transition: risks on objects and resources circulation - Angélique Palle (CM)

Session 5 - Project support - Raphael Danino-Perraud and David Juilien (PT)

Session 6 - Applied exercise: role-playing - Wahel Rashid and David Juilien (PT)

Session 7 - Producing and feeding ourselves: conflicts over resources - Matthieu Brun (CM)

Session 8 - Hydroelectric dams, a geopolitical object - David Juilien and Wahel Rashid (TD)

Session 9 - Mineral raw materials, globalized resources: the example of lithium - Audrey Sérandour (CM)

Session 10 - Waste, a geopolitical object - Wahel Rashid and Raphaël Danino-Perraud (TD)

Session 11 - The contrasting application of the duty of care for resources and conclusion of the course - Raphaël Danino-Perraud (CM)

Session 12 - Homework (1h30)

Class components (lecture, labs, etc.)

Grading

Student learning will be assessed in two ways:

1. A cartographic analysis file, carried out in groups (of 3-4 students) equivalent to 50% of the grade.

Throughout the sequence, students will have to build a geopolitical reflection around a resource or a globalized object. They will have to identify the main actors and issues raised by this resource or object, take a critical look at the materiality of the resources and techniques studied (no technology is neutral) and construct a reflection at different scales (global, regional, national, local).

Based on a bibliographic research, students will have to produce two analytical maps presenting a geopolitical reasoning around a globalized resource or object. At least one of the two maps must be produced on a



global scale. The supervision of this work will begin during the session on the methodology of geopolitical cartography (session 3), then we will have a session dedicated to the accompaniment of projects (session 5). The restitution will take the form of a written file, including the two maps, a description of the problematized legend (in 1 page) and an analysis of the maps (in 5 pages maximum). This written report will be graded.

Follow-up on the project will be organized during the semester through presentations on the state of the art (not graded).

2. A table-top assignment, carried out in session 12 (duration: 1h30) equivalent to 50% of the grade.

This will consist of a commentary on documents (a corpus composed of excerpts from articles, a map and a graph). The corpus will present a case study, which will be analyzed by mobilizing the concepts studied in class.

Course support, bibliography

- ABIS Sébastien, BRUN Matthieu (2020), « Géopolitique de l'agriculture européenne », *Études*, 2020/2 (Février), pp. 17-28.
- LACOSTE Yves (2008), « La géographie, la géopolitique et le raisonnement géographique », *Hérodote*, 2008/3, n°130, pp.17-42. [En ligne] URL : <https://www.cairn.info/revue-herodote-2008-3-page-17.htm>
- PITRON Guillaume (2018), *La guerre des métaux rares : la face cachée de la transition énergétique et numérique*, Paris, Éditions Les liens qui libèrent, 296 pages.
- REBIERE Noémie, « Énergie et géopolitique régionale : quel avenir pour le hub turc ? », *Orient Stratégiques* (n°6), L'Harmattan, Paris, 01/2018, pp.1-15.
- ROTILLON Gilles (2010), *Économie des ressources naturelles*. Collection Repères, Paris, Édition La Découverte, Collection Repères, 128 pages.

Resources

Teaching team: Raphaël DANINO-PERRAUD (PhD in economics, French Ministry of Defence), David JUILIEN, Wahel RASHID, Audrey SÉRANDOUR, Matthieu BRUN, Léa GOBIN, Angélique PALLE, Noémie REBIERE

Learning outcomes covered on the course

At the end of this course, students will be able to :

- adopt a critical view of resources, discuss the issues of access, distribution and control of these resources, and problematize the issues raised by their



exploitation and circulation;

- have factual knowledge on a variety of case studies, located on several continents (Europe, Asia, Latin America) and analyzed at various scales (global, regional, national, local);
- master the basics of the geopolitical analysis method and its key concepts (actors, power relations, representations, territories). He will be able to identify the relevant actors and detect the power relations crystallized around a resource or an object, at various scales;
- read a map and understand it from a geopolitical and critical perspective. They will also have acquired the basics of freehand cartography.

Description of the skills acquired at the end of the course

analyze: study a system as a whole, the situation as a whole. Identify, formulate and analyze a system within the framework of a transdisciplinary approach with its scientific, economic, human dimensions, etc.

C2.2: Import knowledge from other fields or disciplines

C5.3 : Analyze global and/or local issues at the international level and adapt projects or solutions to them





SCIENCE AND ENGINEERING CHALLENGE N°5 COURSES