

Macroeconomics V Economics of Natural Resources

Level: *Bachelor – third year – L3*

Cursus : *Economics*

Semester : **S1**

Teaching hours : 12 hours of lectures (CM) and 12 hours of tutorials

Teacher : Siwar Khelifa

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Objectives of the course :

This course is an introduction to natural resource economics that will be followed by a second part in the following semester. It focuses on the management of natural resources questions: Issues on the Exploitation of exhaustible resources : How much to extract in each period to maximize profit ? In which price to sell ? Optimal time of resource depletion ? Then, it treats issues on the Exploitation of renewable resources : how can we use renewable resources to avoid Overexploitation problems ? Finally, a last part of the course treats the rise of concerns induced by the consequences of the immoderate use of natural resources, and sustainable development.

Plan of the course :

- Chapitre 0 : Introduction
- Chapitre 1 : Le problème du gâteau
- Chapitre 2 : Exploitation des ressources épuisables
- Chapitre 3 : Exploitation des ressources renouvelables
- Chapitre 4 : Développement durable

Skills developed :

- Be able to understand a problem of exploitation of renewable and non-renewable natural resources.
- Be able to solve a discrete-time and continuous-time optimization problem
- Be able to define sustainable development and to distinguish between its different paradigms.

Grading system :

A single written test

Prerequisites :

References :

- Hotelling, Harold (1931). The economics of exhaustible resources. *Journal of political Economy*, 39(2), 137-175.
- Perman, R., Ma, Y., McGilvray, J., & Common, M. (2003). *Natural resource and environmental economics*. Pearson Education.
- Van den Bergh, Jeroen CJM (Ed.). (2002). *Handbook of environmental and resource economics*. Edward Elgar Publishing.